

World News

Business Summary

Efta close to deal with EC over free trade zone

Negotiations to create a free trade zone between the EC and the European Free Trade Association were close to success last night, although Greece was insisting on further concessions over transit licences. The EC's twelve and the seven-member Efta narrowed their differences on the amount of extra aid Norway would make available, and the volume of "cohesion" aid and soft loans Efta would provide for the EC's poorer members. Page 22

French ministers at bay
French prime minister Edith Cresson has forbidden members of her government to leave Paris without first receiving clearance. The security order comes after several violent demonstrations against government ministers by farmers who are angered by falling prices and possible EC agricultural policy reforms. Page 22

Missile talks to restart
The US and the Soviet Union have agreed to resume talks in Geneva early in January on President George Bush's proposals on ballistic missile defences. Page 7

Veteran Turk victorious
Veteran Turkish politician Suleyman Demirel was headed for victory in the general election, though a fragmented vote makes a coalition inevitable after eight years of rule by the Motherland party. Page 22

Major alarm: Commission
The row over the European Commission's intervention in environmental studies for seven construction projects in the UK raged again. John Major, Britain's prime minister, expressed "severe irritation" at the way the matter had been handled. Page 3

US Democrat to attack
Jerry Brown, former governor of California whose eccentricities earned him the nickname "Governor Moonbeam", has entered the race for the Democratic presidential nomination. Page 22

Californian fire rages
California firefighters were still struggling against a fire which has engulfed residential neighbourhoods close to the cities of Oakland and Berkeley, killing 10 people and destroying an estimated 600 homes. Page 6

Return of boat people
The repatriation from Hong Kong of all Vietnamese boat people moved a step closer after Vietnam agreed to accept the forced repatriation of about 250 boat people. Page 4

UK isolated on sanctions
Britain remained isolated on South Africa in spite of a more moderate Commonwealth stance on the lifting of sanctions. Page 4

Zaire crisis mounts
Troops of Zaire's elite presidential guard fired teargas and shots into the air to disperse thousands of pro-democracy demonstrators who had gathered to support Etienne Tshisekedi, the sacked opposition prime minister. Page 4

Madagascar protest off
Madagascar's opposition called off a warning strike launched four months ago to press President Didier Ratsiraka towards political reforms. Page 4

Korean talks resume
Korea's prime minister will travel to North Korea to resume a series of high-level talks aimed at improving relations and easing tensions across the heavily militarised Korean border. Page 4

Oslo expels diplomats
Norway has expelled eight staff at the Soviet embassy for "activities incompatible with their diplomatic status", a term for spying. Page 4

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Lloyd's of London gets writ from 64 US members

By Quentin Peal in Bonn

GERMANY'S five leading economic institutes yesterday issued a grim warning of the consequences of failure to cut wage demands and government spending for the economy, and above all for the former East Germany.

They made an urgent appeal to the government, employers, trade unions and the Bundesbank to co-ordinate their wages, state spending and monetary policies to avoid worsening inflation and a sharp downturn in the economy.

The allegations, by 64 of the insurance market's US members - the individuals whose assets support underwriting - allege that Lloyd's and its agents broke the law by misrepresenting risks faced by potential investors in the market. Page 22

SIEMENS of Germany is to tighten its control over the ailing Nixdorf Computer company, which it rescued last year, by raising its stake from the present 78 per cent of the combined voting and preference stock to 100 per cent at a cost of nearly DM1.5bn (\$1.1bn). Page 23

LAFARGE Côte d'Ivoire, France's largest cement and construction materials group, plans to continue its expansion in Spain by taking a large stake in Tessa, a FF1bn (\$170m) per year turnover building products group. Page 23

TIME Warner, US media and entertainment giant, revealed a \$26m third quarter net loss compared with a \$91m deficit a year ago. Page 23

SANWA International launched 10 authorised unit trusts in the UK, the first entry by a Japanese institution into the UK unit trust industry. Page 23

MANNESMANN, German steel and engineering group, is to acquire a 95.2 per cent stake of the voting shares of VDO Adolf Schmidling, a Frankfurt-based manufacturer of instrumentation systems for cars and aircraft. Page 23

US government is considering cutting taxes for middle-income families as part of effort to stimulate economic growth. Page 7

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NATIONAL Westminster Bancorp, wholly owned US subsidiary of Britain's National Westminster Bank, revealed a third-quarter loss of \$65.7m. Page 23

SKF, world's leading rolling bearings manufacturer, has announced a 9.2 per cent drop in profits (after financial items) for the first nine months of the year to SKr65m (\$13.8m) compared with SKr1.78bn for the same period of 1990. Page 23

CHASE Manhattan, New York bank that has been hit by the real-estate slump, released improved third-quarter results which suggest the bank's restructuring and cost-cutting policy is beginning to pay off. Page 24

From today, the FT-SE Eurotrack 100 index can be found in the panel immediately below this column. The index, launched 4 years ago, covers 100 leading continental European shares listed on Seag International, the London Stock Exchange's international marketplace.

Fulmer statistics on the FT-SE Eurotrack 100 can be found on the World Stock Markets page each day. Details of the FT 30-share Ordinary index, formerly carried in the panel below, can be found each day on the London Stock Market page.

Apple sets sights on market for notebook computers

John Sculley (left), chairman and chief executive of Apple, has high hopes that the US computer company's new "Macintosh PowerBook" notebook computers will become the market leader. Page 14

The plea came in the latest autumn survey of the German economy issued by the five institutes, which reported that the collapse of the west German economy had bottomed out - but that there was no sign of any sustained recovery. A forecast for 12.5 per cent growth in the coming year was described as nothing more than "a technical correction of the collapse."

Initial government reaction to the survey completely ignored its overwhelmingly gloomy tone, and commended instead its conclusion that the collapse of the eastern economy had bottomed out. The government spokesman said this proved that the "eastern upswing" had begun, in spite of repeated statements in the document to the contrary.

The institutes' report was particularly outspoken in warning of the consequences of a failure to restrain wage demands in both east and west, and government spending in the west.

The drive for wage equalisation in the east was

destroying the competitiveness of eastern industry faster than any productivity gains could be achieved through new investment, the economists said. The result was that the inflow of private investment was discouraged.

The two growth sectors in the east today - construction and retail trade - relied on public sector finance and the wages boom, respectively. That trend would continue unless incomes were restrained in all but those sectors of genuine labour shortage.

"In east Germany there will be no economy able to develop which is as efficient as that in west Germany, and which offers enough jobs," it said. "Many jobs in the new Bundesländer are not guaranteed in the long term, because they depend on the distribution of state finance."

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Israeli objections to PLO role may block peace talks

By Hugh Carnegy in Jerusalem and Max Rodenbeck in Cairo

ISRAEL'S prime minister warned yesterday that his government still had to scrutinise the list of Palestinian delegates to next week's Middle East peace conference to ensure they met Israeli terms for attending the talks.

Mr Yitzhak Shamir's statement came as Mr Yasir Arafat, chairman of the Palestine Liberation Organisation, stressed the significance of his role in the peace process and his closeness to the delegation representing the Palestinians at the talks.

Israel has said it will not accept any direct role for the PLO.

Mr James Baker, US secretary of state, has assured Mr Shamir that the Palestinian delegation, which is likely to be announced today in Jerusalem, would not contravene Israel's conditions that it should exclude members of the PLO and residents of Jerusalem.

Palestinian sources have exposed the extent to which the Israeli government has been forced to turn a blind eye to the PLO's thinly disguised presence. An irritated Mr Shamir said yesterday of the Palestinian delegation: "We will have to check the names and we will act accordingly."

Israeli officials indicated they did not expect a major upset, but stressed they would stick to their conditions. "The main test will be in the conference itself," an official close to Mr Shamir said. "If we will be able to accept this, we did not agree to this," Mr Shamir said. "This really takes us by surprise."

Mr Shamir yesterday met Egypt's president Hosni Mubarak in an effort to heal Arab divisions before the conference of territorial concessions by Israel. Even if they were to do so, Mr Shamir has objected to as negotiators, such as Mr Hussein.

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STOCK INDICES

FT-SE 100: 2,575.7 (-25.4)

FT-SE Eurotrack 100: 1,097.89 (-1.12)

FT-SE All-Share: 1,242.46 (-0.854)

London: DM1.6905 (1.8885)

FF2.7675 (5.7575)

SF1.4836 (1.4755)

Y130.7 (129.75)

3,056.45 (-21.69)

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INTERNATIONAL NEWS

Hanoi accepts forced return of 250 refugees

By Angus Foster in Hong Kong

THE FULL repatriation of all Vietnamese boat people from Hong Kong who do not qualify as genuine refugees moved a step closer yesterday when Vietnam agreed to take back a small number of boat people, even if they do not want to go.

However, Vietnam is unlikely to agree to widen the scope of the agreement before the first flight of boat people is sent home, probably in mid-November.

This follows an announcement yesterday that Vietnam is prepared to accept the forced return of about 250 "double backers", people who have left Vietnam twice, and their families. The decision clears the way for Hong Kong to implement the first forced repatriation since 1989, when the colony was widely criticised, mainly by the US, for sending back 51 people against their will. This time US criticism is expected to be muted.

The agreement fell short of expectations because it does not address the more sensitive question of the almost 20,000

boat people in Hong Kong classified as economic migrants and therefore not eligible for resettlement in the West. Some of these boat people have been in Hong Kong for three years or longer and are likely to resist with force moves to send them back.

But government officials described the agreement on double backers as the "first step" and were confident of further agreements in the next few weeks. They said Vietnam remains committed to accepting all non-refugees but is cautious about the pace of returns.

Hong Kong also hopes the agreement, although limited, will persuade more boat people to return voluntarily rather than face possible forced repatriation. A forced return of boat people could also dislodge more people from leaving Vietnam.

Vietnam first indicated it was prepared to accept forced repatriation during talks in September. British officials believe Vietnam wants to solve the boat people problem to peer pressure.



Vietnamese boat people arrive in Hong Kong. Vietnam has agreed to allow forced repatriation in some cases

Britain remains the odd man out

By Robert Mauthner and Michael Holman in Harare

BRITAIN yesterday remained the odd man out in South Africa in Harare in spite of a more moderate Commonwealth stance on the lifting of sanctions.

The final communiqué of the six-day Commonwealth heads of government conference reflected efforts to reach a consensus, but the gap that remained over the issue was underlined in a paragraph setting out the British position.

In contrast to the rancour and controversy that has marked successive Commonwealth conferences over the past decade, the Harare meeting succeeded in healing many of the wounds left by the clashes between Mrs Margaret Thatcher, the former prime minister, with her partners over South Africa.

The combination of progress towards a peace settlement in South Africa and the more conciliatory approach of her successor, Mr John Major, helped create a remarkably cordial and constructive climate.

In Harare, Commonwealth leaders who welcomed the important changes that had taken place in South Africa in the last 20 months unanimously agreed to lift so-called "people to people" sanctions immediately. These include consular and visa restrictions.

UK premier defends declaration

By Robert Mauthner and Michael Holman

MR JOHN Major, the British prime minister, yesterday made a spirited defence of the Commonwealth declaration of principles issued on Sunday, and rejected claims that its pledges on democracy and human rights would prove to be ineffective. "I think it [the declaration] is a mixture of carrot and stick."

All the member governments had put their name to matters that collectively came under the term of good government, even if the term itself was not used.

Mr Major said there had been "a rebirth of democracy around the world", but admitted the declaration did not provide for any obvious mechanism for enforcing pledges on democracy and human rights.

The force of "peer pressure" and the extent to which countries were increasingly interdependent would have a big influence on countries which fell short of the principles adopted.

He underlined the unanimous agreement reached by the heads of government on the need for a successful outcome of the Uruguay Round of trade negotiations. "Failure would be an absolute hammer blow for the developing countries. The cost to them of protectionism in the industrial world currently exceeds the total value of aid they receive from the industrial world."

Financial sanctions, the communiqué continued, should be lifted either "when agreement is reached on the text of a new democratic constitution" or "by agreement at South Africa's all-party conference or by an interim government". The original draft did not offer the second and third options.

Japanese markets expect rate cut

By Robert Thomson in Tokyo

JAPAN'S money supply expanded by a low 2.2 per cent last month, down from a revised 2.7 per cent growth in August, heightening stock and bond market expectations of a cut in official interest rates this week.

The low growth reflects the continued slowing of economic activity in Japan, and intensified the debate between the Bank of Japan and political and industrial leaders, who fear that companies are being

starved of funds and that the economy is in danger of stalling.

But the Bank of Japan said the decline was partly explained by the transfer of funds from bank accounts to postal savings accounts, which are outside the M2 plus certificates of deposit measure, and by a slowdown in bank lending.

It said that banks have money to lend, but companies have used other sources,

including cash reserves, to fund their investments.

Central bank officials have argued in recent days that there is no need for a change in monetary policy, but the release of the money supply figures yesterday prompted Japanese politicians and industry leaders to call for an immediate reduction in the official discount rate (ODR), which stands at 5.5 per cent.

Mr Russell Jones, senior economist at DBS Phillips &

Drew, said that the flow of money into postal savings, which offer higher interest rates, naturally increases when market rates fall. He said these transfers have exaggerated the slowdown in money supply expansion.

The low growth is not a threat to economic health at the moment, but if it becomes a threat, it has just about reached the stage when the bank will need to do something," Mr Jones said.

Mr Hammond al-Roqa, the Kuwaiti oil minister, said yesterday that the last 58 of the 733 wells set ablaze or destroyed by Iraq during the Gulf War would be capped by early November.

One lawyer yesterday said the people involved were absolutely furious. Members of CKG say that KPMG Peat Marwick in London is embarrassed by the outcome because it was apparently not aware of the approaches being made to Kuwait by its US sister organisation until late in the day.

Mr Bruce Bingham of KPMG Peat Marwick in New York yesterday described the US and UK arms of the firm as "separate partnerships" and confirmed that the US partners would be establishing neighbourhood offices in Kuwait to process claims.

Modem organisations yesterday condemned the state government's compulsory acquisition of the disputed land around the mosque and warned that demolition of the mosque "will tear the fabric of our secular society".

Over the past two years, the dispute has provoked widespread rioting and bloodshed.

They are particularly disappointed at losing the bulk of the compensation work because Sheikh Saad al-Sabah, the Kuwaiti Crown Prince, and Sheikh Ali Khalifa al-Sabah, the then finance minister, were enthusiastic when Lord Limerick first presented the proposal to them in April.

Thereafter Sheikh Ali was dropped from the Finance Ministry and the Kuwaiti government decided to distribute the compensation work to different groups. Rivals of the CKG suggested its package was too expensive.

British businesses have lost visible as well as invisible trade in Kuwait after a promising post-war start. Delays in finalising a contract for a British oilfield firefighting consortium known as the Kuwait British Group (KBG) have already cost the group part of the firefighting component of its work.

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On the question of population growth, changes in a society's

should be adopted to reflect the

the report suggests that environmental quality and natural resources should be properly valued in national accounting in order to achieve sustainable development. There should be a "true statement" of national income showing depreciation or preservation of natural assets.

Individual companies should commit themselves to sustainable and environmental excellence and the minimisation of raw material and energy use. They should also close the results of environmental monitoring of their activities and not use commercial confidentiality to frustrate the release of information.

Charges for polluting the atmosphere should be higher than the cost of removing that pollution. The report believes this would "motivate industry to prevent pollution and promote development of anti-pollution technology."

The report says that since the mid-18th century the con-

Korean talks restart as nuclear fears mount

By John Riddick in Seoul

MR CHUNG WON Shik, South Korea's prime minister, will travel to North Korea today to resume a series of high level talks which are aimed at improving relations and easing tensions across the heavily militarised Korean border.

They come at a time of growing concern about North Korea's nuclear programme and increasing economic and diplomatic pressures on the North Korean regime.

The talks, which have been postponed from February this year and which will be held in Pyongyang, are the fourth in a series of meetings between the prime ministers of the two countries.

"We are hopeful for progress," said Mr Lee Dong Bok, special assistant to the prime minister and a member of the South Korean delegation.

"North Korea is under unusually heavy pressure to change and we have been preparing a very flexible position on most of the outstanding issues," he said.

But western diplomats in Seoul said that they expected little progress on the issue of North Korea's nuclear programme, the subject of greatest concern. South Korea and its allies believe that North Korea will be able to produce a nuclear device by the middle of the decade.

Religious tensions grow in Ayodhya row

By David Housego in New Delhi

TENSION between Hindus and Moslems in northern India rose sharply yesterday as Hindu militants embarked on the final phase of their campaign to build a new Hindu temple at Ayodhya on land claimed by Moslems.

Leaders of the Vishwa Hindu Parishad (VHP), the Hindu crusading movement, took part in religious ceremonies at Ayodhya in Uttar Pradesh intended to mark the beginning of construction.

At the same time Mr Ashok Singhal, the VHP leader, made what he called a "last appeal" to Moslems to hand over voluntarily the 16th century Babri mosque that stands in the way

of the completion of the temple.

The controversy over the temple has become the most divisive issue in Indian politics. In recent days minor temples and mosques close to the mosque have been pulled down preparatory to construction work beginning.

Modem organisations yesterday condemned the state government's compulsory acquisition of the disputed land around the mosque and warned that demolition of the mosque "will tear the fabric of our secular society".

Over the past two years, the dispute has provoked widespread rioting and bloodshed.

Zaire slides towards chaos

By Julian Ozanne in Nairobi

PRESIDENT Mobutu Sese Seko's continued sabotage of efforts to install a credible government to pull Zaire out of severe economic and political crisis threaten to plunge the country back into violent upheaval.

Troops of the elite presidential guard yesterday fired tear gas and shot into the air to disperse thousands of pro-democracy demonstrators who gathered to support Mr Etienne Tshisekedi, the sacked opposition prime minister, in his failed bid to enter his office.

The tussle between the two

men came after state-run television yesterday carried Mr Mobutu's official decree dismissing Mr Tshisekedi - the man he was forced to name as prime minister after riots and looting last month wrecked the capital Kinshasa and left 350 people dead.

Amid signs of growing tension yesterday, soldiers set up roadblocks and checkpoints on roads leading into the city and blocked access to embassies where demonstrators tried to take refuge.

Western diplomats believe an opposition-led interim government with substantial powers wrested from the president is the only hope to prevent the country slipping towards chaos.

France and Belgium, who still have paratroops in Kinshasa, have made it clear to Mr Mobutu that such a government is a pre-condition for their support and assistance.

Yesterday's move by Mr Mobutu, after three weeks of political impasse, suggest any optimism the president was willing to share power in the interests of national unity and stability has been ill-founded.



Mobutu: intervention

Environment agencies start to flex their muscles

John Hunt on some far-reaching proposals on population control, energy conservation and pollution

AN INTERNATIONAL plan was unveiled yesterday to "harness the total resources of humanity" to improve the global environment by measures which include massive reductions in energy consumption and the use of natural resources in industrialised countries.

The proposals, put forward by the United Nations Environment Programme (UNEP), the world conservation union (IUCN) and the World Wide Fund for Nature (WWF), envisage the establishment of a new world organisation - probably based on the United Nations - to co-ordinate environmental protection and encourage sustainable development which does not deplete natural resources.

The report, entitled "Caring for the Earth," suggest that the UN general assembly could coordinate the system through its committees and produce annual reports on the state of the world environment.

It calls for a global alliance of governments committed to a "universal declaration" on sustainable growth and environmental protection which would be signed by all countries by the year 2000. The alliance would have the backing of

business and industry, religious leaders and citizens' groups.

Launching the report in London, the Duke of Edinburgh, president of the WWF, warned that unless population growth was halted soon world resources would no longer be able to support humanity's needs and economies would face collapse.

The report was given the

backing of the UK government by Mr Tony Baldry, junior environment minister, and was also endorsed by Mr Neil Kinnock, the Labour Party leader, and Mr Paddy Ashdown, leader of the Liberal Democrats.

The report of three years'

work by scientists and conservationists, it was launched

simultaneously yesterday by national leaders and public figures in 65 cities throughout the world including London, New York, Paris, Bonn, Tokyo, Moscow and Beijing.

A programme costing

\$1.385bn (£745bn) over the next

decade is proposed and would

involve increased aid for developing countries and measures to curb population growth. The

cost would partly be met by a

switch from world military

spending currently estimated

at \$90bn a year.

The report contains over 130 proposals and is intended to influence politicians attending next June's "Earth Summit."

"The resources of the planet are already overstressed," said Mr Charles de Haas, director general of WWF International.

"Governments must act but they will only succeed with their people's support."

With regard to energy and raw materials, the proposals urge high energy use countries to reduce per capita energy consumption to 80 gigajoules a year. This would mean huge reductions in energy use by

the US (currently 260 gigajoules) and Britain (now 150 gigajoules).

They should reduce energy consumption by one per cent a year until the end of the century and two per cent annually afterwards.

Those with consumption at or just below 80 - such as Israel and Venezuela - or far below this level, such as China and Bangladesh, should not exceed it as they industrialise further.

High consumption countries should introduce economic incentives and taxes to encourage economy in energy and raw materials and abolish subsidies that distort resources

prices. "Taxes on raw materials could be set similarly to encourage more efficient technologies, more use of renewable resources and more durable products," the report states.

On economic measures, the report suggests that environmental quality and natural resources should be properly valued in national accounting in order to achieve sustainable development. There should be a "true statement" of national income showing depreciation or preservation of natural assets.

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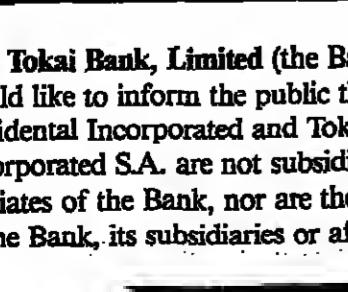
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INTERNATIONAL NEWS

Beijing issues renewed warning about finances

DESPITE improvements in China's economic performance, the government's financial situation remains troubled, crushed under the weight of subsidies and loss-making state enterprises, a senior official said yesterday, Reuter reports from Beijing.

"The national economy has regained normal growth," Zhang Zhongli, spokesman for the State Statistical Bureau, told a news conference. "Nevertheless, some problems and unstable factors remain in the performance of the national economy. First and foremost is the difficult situation of government finance."

After the collapse of communist rule in eastern Europe and the Soviet Union and the devastating economic problems there, Beijing's hardline communist leaders have staked their legitimacy on the results of continued economic reform, diplomats said. Store shelves are stocked with food and vegetables and private stalls offer a wide variety of goods.

Beijing may be mortgaging its future, however, with huge subsidies to keep price stable and loss-making state industries afloat. Last week a finance ministry official, Wang Xingyi, told the state media: "Our finances are facing extremely serious problems and the whole financial situation is quite grim."

Zhang said 36 per cent of state enterprises, the cornerstone of the socialist economy, were running with losses in the first three quarters totalling 200 billion yuan (\$3.7bn).

But there had been some improvement recently, with third-quarter losses on average 5.8 per cent below those of the

first two quarters. Total stockpiles of unwanted, unsold goods are now worth more than 500bn yuan, with over 200bn yuan in the plants' warehouses and 300bn yuan in stores and at distributors.

Enterprises are still choked by debt chains as one loss-maker cannot afford to pay back another. Zhang said debts between enterprises now totalled 200bn yuan.

With the government pouring some 17bn yuan in loans into the enterprises to try to clear the debt from the end of last month, Beijing runs the risk of stimulating a burst of inflation, economists said.

Bank loans are growing faster than the economy as a whole "thus aggravating the pressure of potential inflation", Zhang said. Inflation in cities averaged 8 per cent in the first nine months, but was well over 10 per cent in cities such as Beijing and Shanghai. Retail price inflation in the country as a whole rose to 4 per cent in September, against an average of 2.5 per cent in the first nine months.

Gross national product grew a real 6.8 per cent in the first nine months against the same period a year earlier, and Zhang said the rate for the year would be greater than 6 per cent. GNP grew 5 per cent in 1990 over 1989. Industrial production, which grew at 13.9 per cent in the first three quarters, would maintain that level of growth when the whole of 1991 was compared with 1990, Zhang said.

Wages and salaries of urban employees grew a real 8 per cent in the three quarters, while farmers' cash income grew a real 7 per cent.

Chinese economic reform damages health service

CHINA'S public health service has seriously deteriorated in the past decade with the adoption of market-oriented economic reforms, according to western experts.

While the country's living standards have generally risen, its co-operative medical care system has collapsed in many rural areas since the communes were dismantled in the early 1980s. "Sanitation and health services have suffered since the communes were disbanded and there is no longer a community financial base to provide for those services," one western observer said.

Agricultural collectivisation formed the foundation for medical care in China in the 1950s when the funds of collective enterprises paid for medical services in the rural areas. In the 1960s, under Chairman Mao, the government pioneered the use of "barefoot doctors", partially trained medical workers who provided rudimentary medical care in the countryside. Their example later served as a model for much of the developing world.

Beijing also made the improvement of health care in rural China a top priority. In the 1980s and 1990s co-operative medical care was responsible for basic sanitation, hygiene, health education, and public health services such as immunisation and ante-natal care.

All of these services were free or very cheap for most peasants, because they were paid for by the collective. This is no longer the case. Individuals are now charged a fee for each service provided. This is the primary system of financing medical care in the rural areas.

While doctors were not paid separately under the collective system, these public health services were incorporated into the broad scope of their activi-

ties. Medical care has collapsed in many rural areas, writes an FT correspondent

enterprises must also cover their own medical costs.

The real problem with this fee-for-medical-service is what the Chinese don't pay for. Under the previous system, preventive and educational services, insurance and immunisation were covered and increased the general level of health," one western observer said. From the patient's viewpoint, because a visit to the doctor is now more expensive, many wait longer until they are even more sick and can be attended to at a more sophisticated county clinic.

Large public health campaigns have gradually been eroded by lack of funds. For example, hygiene measures, such as testing to ensure that night soil does not leak into the drinking water, are not done as routinely as they should be.

And with the lack of community-based labour, there is no leverage to implement sweeping disease prevention measures, similar to past rat and insect eradication campaigns.

From the gradual decrease of public health measures in the poorer areas, pressure on village doctors to earn more money is growing. Under the new fee-for-service system, doctors are not paid for the range of hygiene, sanitation and educational services they formerly helped to provide.

While doctors were not paid separately under the collective system, these public health services were incorporated into the broad scope of their activi-

ties. In addition to obtaining fees for services, doctors also prescribe and dispense medicine. They now earn royalties from the drugs they sell, in contrast to the time when they were part of a collective and all royalties were simply put back into the collective.

This pressure to sell more drugs than are necessary is exacerbated by the tendency of many doctors to over-prescribe medicine. In some cases, more complicated, expensive forms of treatment, such as intravenous drips to inject medicine, are often used when a simpler, less costly method would suffice, western experts said. From the patient's viewpoint, because a visit to the doctor is now more expensive, many wait longer until they are even more sick and can be attended to at a more sophisticated county clinic.

In the face of all of these problems, the Ministry of Public Health is exploring and experimenting with a wide variety of methods of financing and insurance schemes. It hopes by 2000 to have revamped the system entirely.

But how will it get better unless the state gives them money?" one western expert wonders.

The ministry has also taken steps to raise the qualifications of the "barefoot doctors".

Despite the enormous problems, China's health care system by far surpasses that of many other developing countries. After Japan and South Korea, life expectancy is the highest in Asia.

The country's infant mortality rate and the number of contagious diseases are also relatively low according to western experts. The days when entire villages had to be evacuated because of disease are long past.



The three candidates for the leadership of Japan's Liberal Democratic party at a news conference in Tokyo yesterday ahead of next Sunday's party election. They are (left to right): Mr Ichiro Miyazawa, Mr Michio Watanabe and Mr Hiroshi Mitsuzuka. The winner becomes prime minister

UN team in Burma to visit Nobel laureate

A UNITED Nations human rights mission arrived in Burma yesterday to try to visit Ms Aung San Suu Kyi, the detained opposition leader awarded the Nobel Peace Prize last week for standing up to "a regime characterised by brutality".

The mission, led by a Japanese university professor, Mr Yozo Yokota, is to stay in Burma until the weekend, said an official of the UN Development Programme contacted by telephone in Rangoon.

Western and Asian diplomats in Bangkok and Rangoon said Mr Yokota would try to investigate a wide range of human rights issues and seek access to Ms Aung San Suu Kyi.

She has not been seen by outsiders since early this year, when she was spotted from houses overlooking the garden in her compound on Rangoon's University Avenue.

A similar mission last year was denied access to her and other detained dissidents.

Ms Aung San Suu Kyi was put under house arrest in July 1989 after her outspoken attacks on the ruling military junta, which shot dead thousands of people during a mass uprising for democracy in 1988. The regime has failed or persecuted thousands of opponents.

Mr Yokota will report to the UN Human Rights Commission in Geneva. He declined to comment on his mission when he was contacted before leaving Bangkok.

Last year, the Rangoon government greatly restricted a UN mission led by another Japanese professor, Mrs Sadako Ogata, when it attempted to seek information on human rights violations.

Last Monday, the Nobel committee in Norway awarded Ms Aung San Suu Kyi its annual peace prize for her courage in standing up to the Burmese regime.

The mission, led by a Japanese university professor, Mr Yozo Yokota, is to stay in Burma until the weekend, said an official of the UN Development Programme contacted by telephone in Rangoon.

Human rights groups, including Amnesty International, have catalogued numerous testimonies of sometimes fatal torture in Burma.

A senior member of Ms Aung San Suu Kyi's National League for Democracy (NLD) died in detention during Mrs Ogata's visit last November.

The junta said Ms Maung Ko committed suicide.

Relatives alleged that heavy bruising all over his body showed he had been tortured to death.

The NLD won the May 1990 general election by a landslide but the junta has refused to hand over power and has arrested most NLD leaders.

The award of the peace prize to Ms Aung San Suu Kyi has intensified international calls for the junta to release her and honour the election result.

Last year, Sweden introduced a motion at the UN General Assembly criticising the junta's human rights record and expressing concern about its failure to step down. It was withdrawn after opposition, but Sweden plans to reintroduce it this year.

Taiwan joins fund in Latin America

TAIWAN, trying to use its economic strength to break out of international isolation, will join the Central American Bank for Economic Integration as a sovereign state after pledging it \$150m, Reuter reports from Taipei.

Mr Federico Alvarez Fernandez, president of the bank, said Taiwan would become an extra-regional member after approval by member countries, probably by the end of this year. "We believe the island can contribute to the economic development of Central America," he said yesterday.

The multilateral lending institution covers Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua, which are among the 28 states that formally recognise Taipei. Nicaragua restored relations last November.

Taiwan will join under its official name, "Republic of China", the island's foreign ministry said.

The bank will be the 11th international organisation to admit Taiwan under its official name. Taipei has had to use different names, such as "Taipei, China", to take part in other groups. The island is located in a struggle against China for international recognition. Beijing views Taiwan as a renegade province and regularly seeks to prevent it from expanding ties with foreign countries.

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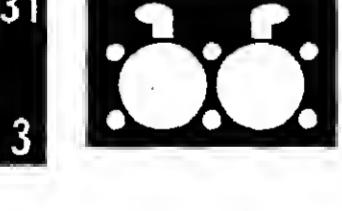
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But that would be another story.

RANK XEROX
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UK NEWS

Labour protest over Unisys jobless scheme

By Michael Skapinker

MR ROBIN COOK, a leading opposition Labour party spokesman, has protested to Unisys, the US computer manufacturer, over plans to halve the redundancy payments of employees from the company's plant at Livingston, Scotland, if they leave for another job before the plant closes next February.

Unisys said earlier this month it would close the factory with the loss of 688 jobs as part of a programme of reducing the worldwide workforce by 10,000.

In a letter to Mr Jim Unruh, Unisys's president, Mr Cook, who is the MP for the nearby town of Livingston, said it was unfair to penalise staff who managed to find alternative employment.

"Given the rising unemployment in Britain they would be foolish not to take the chance of a job if they were offered it," Mr Cook said.

Unisys is offering employees under 40 years old two weeks redundancy payment for each year of service and two and a half years for those over 40.

Opposition pledges private loans for BR

By Richard Tomkins, Transport Correspondent

THE Labour party will allow British Rail (BR), the state railway, to fund the acquisition of badly needed commuter trains with private-sector finance if the opposition wins the general election.

Mr John Prescott, the party's transport spokesman, will tell a conference on railway finance today that a Labour government would encourage BR to buy trains for Network SouthEast through sale-and-leaseback deals arranged through City banks.

The first routes to benefit would be the commuter railways between London and Kent in south east England.

BR has won government approval for plans to replace the trains, but has had to post-

pone the later phases of the replacement programme because it has run out of money.

BR's powers to invest are at present constrained by tough Treasury rules which prevent it from obtaining finance from anywhere other than the government.

This is already common in Continental Europe. In France, for example, the state-owned railway buys its high-speed trains from the manufacturer, then sells them to banks and leases them back.

The government says laxer financial strictures for Continental railways have led to the accumulation of massive debts requiring periodic write-offs at the taxpayer's expense.

Retail sales remain at low levels despite interest rate cut

By Rachel Johnson, Economics Staff

RETAIL SALES volumes have stuck at low levels despite the cut in UK interest rates at the beginning of September, according to figures which hit shares and the pound yesterday.

Provisional estimates from the Central Statistical Office (CSO) revealed that September sales volumes failed to rise above August's depressed levels. They were lower than in July, when bad weather boosted retail spending and government hopes of an "economic spring".

The latest figures disputed traders on London's stock and currency mar-

kets after a moderately heartening distributive trades survey from the Confederation of British Industry, the employers' organisation, yesterday.

Retailers, meanwhile, had reported higher annual sales in September for the second month running.

The retail sales data reinforced the nervousness roused by a weekend opinion poll putting the opposition Labour party seven percentage points ahead of the Conservatives.

The pound lost ground to close at DM2.9050 after Friday's DM2.9125, limiting the chancellor of the exchequer's

scope in next month's Autumn Statement for cutting interest rates or raising public spending to speed up the economy.

Sterling cannot sink below its DM2.8625 floor in the European exchange rate mechanism.

Though the amount of goods sold last month was 0.7 per cent down on the same month a year ago, an assessment of sales over the last two quarters shows the trend has begun gently to rise.

According to the less volatile three-monthly comparisons, sales volumes

in July to September were 0.6 per cent up on the previous three months, but still half a per cent lower than the same three months a year earlier.

The Treasury pointed out that this was the first complete set of economic data for the third quarter, and could point to a rise in gross domestic product during this period. Consumer spending counts for about two-thirds of gross domestic product.

Additionally, the Retail Consortium, the umbrella body for the retailing industry, said September was a "small but encouraging improve-

ment" because volumes were static after August's fall.

It supported the CSO's picture of retailing which showed no upturn yet but no worsening in trading conditions.

Mr Steven Bell, economist at Morgan Grenfell, said that he was confident volumes would soon pick up as the savings ratio - the proportion of income saved not spent - had stabilised at around 10 per cent.

"It will start to fall and shortly lead to a pick-up in consumption necessary for recovery," he predicted.

UK manufacturing faces 10-year challenge to compete

By Michael Cassell, Business Correspondent

BRITAIN'S manufacturing industries have made big strides over the last decade but they still face a 10-year struggle to catch up with overseas competitors, according to the Confederation of British Industry (CBI).

Yesterday's report from the manufacturing advisory group of the CBI, the employers' organisation, gives credit to Britain's manufacturing achievements over recent years. But, simultaneously, it dashes any lingering complacency by emphasising the yawning gap which still separates the UK from what the employers' organisation calls "the world's best".

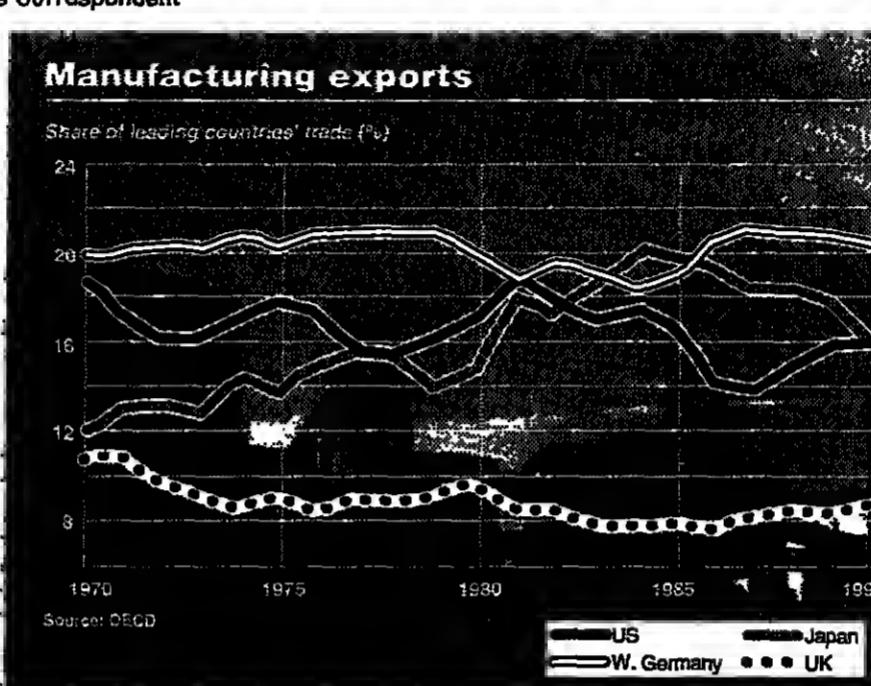
The report stresses that UK manufacturing output is running 25 per cent above the level recorded 10 years ago. Manufacturing now employs 10m people directly or indirectly, which contributes more than £100bn to the country's gross domestic product.

The UK's share of manufactured exports is, after decades of decline, rising again and while growth in manufacturing output is close to the average for industrialised countries productivity has increased more rapidly than every country except Japan since 1980.

Major factors in the improved performance include increased emphasis on quality, training and innovation - areas where UK companies have traditionally lagged behind.

Improved employee relations and a growing army of small manufacturing companies - increasing at the rate of 100 a week in the last ten years - have also contributed to a better manufacturing effort.

Even so, the CBI says Britain's manufacturing com-



petitors still have better equipment, better trained personnel and a more productive relationship with owners and governments.

It emphasises that UK manufacturing productivity is still 30 per cent lower than in West Germany, 35 per cent below Japan and around 45 per cent below the United States.

Ending the productivity gap with West Germany by the end of the century will, for example, require UK productivity growth to exceed German performance by 3.5 per cent each year. This implies growth of up to 6 per cent annually, compared with an average 4 per cent between 1985 and 1990.

The recession, according to the CBI report, has made man-

ufacturers significantly worse in the short-term, with a higher proportion of manufacturers working below capacity than at any time since 1983. Competitive

it emphasises that UK man-

ufacturing productivity is still

30 per cent lower than in West

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below the United States.

In calling for a "fundamental shift in attitudes at all levels", however, the CBI also addresses the longer-term weaknesses afflicting the manufacturing sector and apportioning blame between companies, banks and government.

The CBI criticises the wide

variation in productivity

between the best and worst

manufacturing companies and

calls for the universal adoption

of "best practice" management

techniques aimed at beating

the productivity performances

achieved in Japan and the US.

It wants better training, the

spread of an "innovation culture"

and improved relationships

between customers and

suppliers.

The CBI also gives high pri-

ority to the need for a more

supportive approach from gov-

ernment. It says the Depart-

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often appears ineffective in

promoting the interests of

manufacturing in Whitehall

and suggests it should play a

greater role in formulating any

government policy with a

direct bearing on manufacturing

competitiveness.

The report calls on the gov-

ernment to lower the burden of business taxation in order to encourage manufacturing investment. The CBI points out that the taxation of corporate profit rose steadily during the 1980s and is higher than the European Community average.

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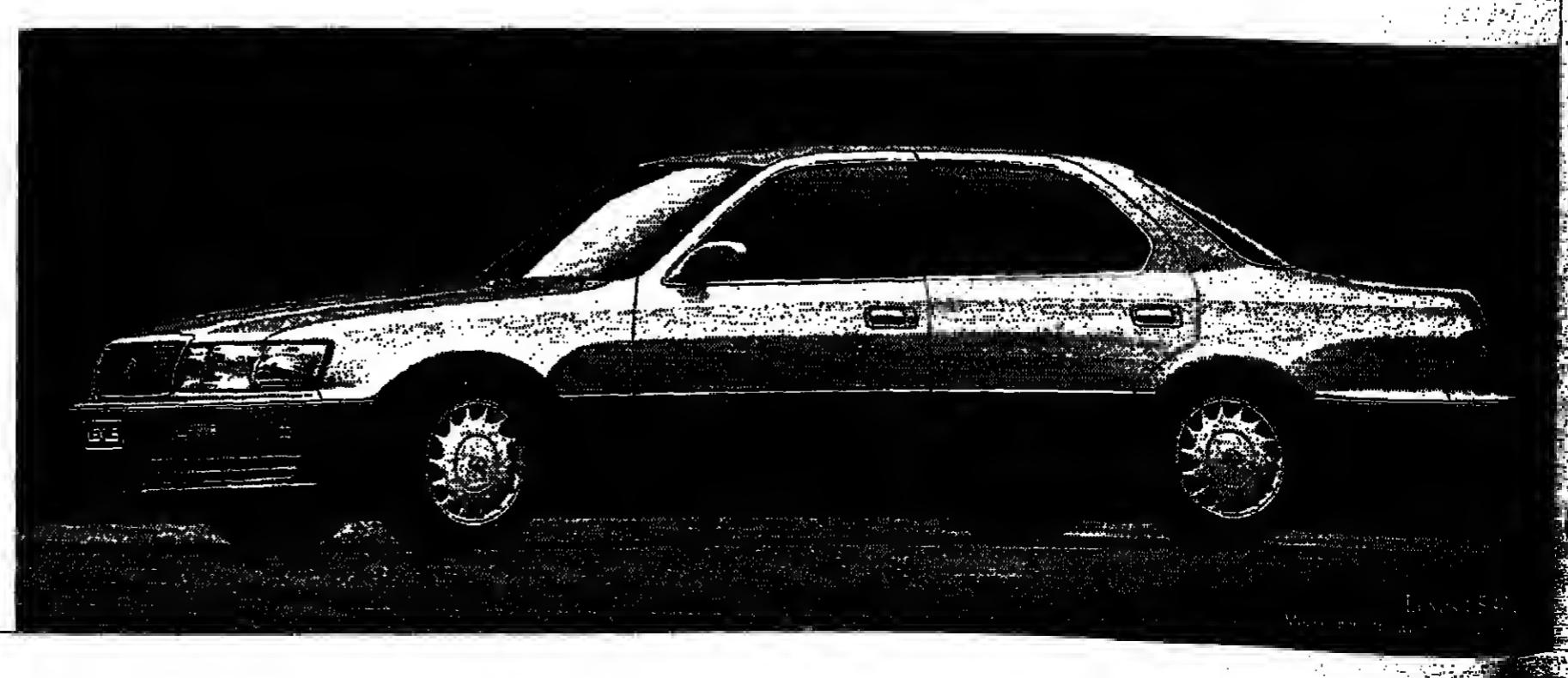
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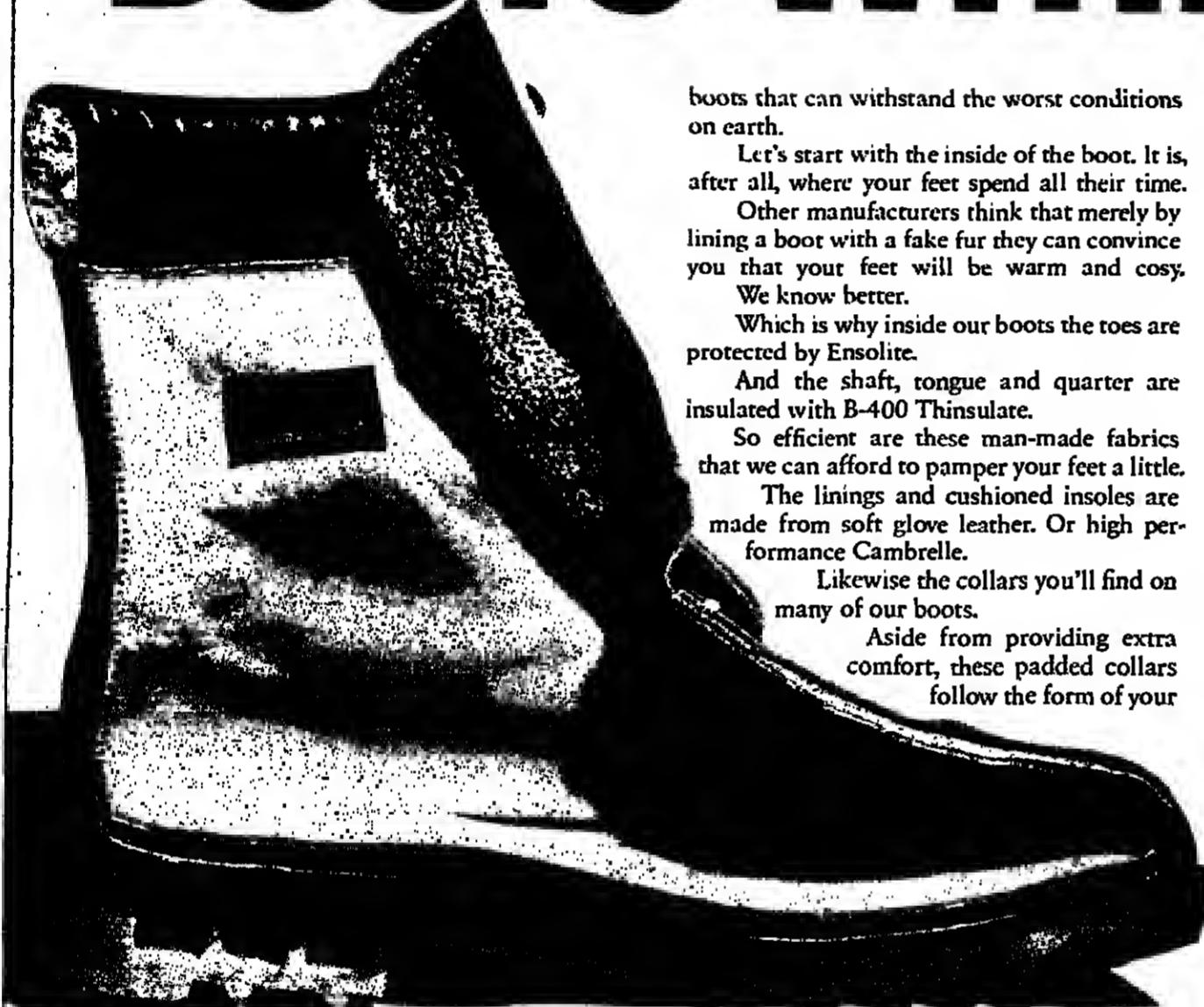
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Which is very clever of it.

Except that a lot of people regard their extremities as pretty vital too.

Particularly their feet.

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Which, as you can imagine, becomes the not-so great-outdoors when winter sets in.

So how do we protect our customer's feet from the body's natural desire to leave them in the lurch every time there's a cold snap?

We use every material known to man (and some known only to Timberland) to build

boots that can withstand the worst conditions on earth.

Let's start with the inside of the boot. It is, after all, where your feet spend all their time.

Other manufacturers think that merely by lining a boot with a fake fur they can convince you that your feet will be warm and cosy.

We know better.

Which is why inside our boots the toes are protected by Ensolite.

And the shaft, tongue and quarter are insulated with B-400 Thinsulate.

So efficient are these man-made fabrics that we can afford to pamper your feet a little. The linings and cushioned insoles are made from soft glove leather. Or high performance Cambrelle.

Likewise the collars you'll find on many of our boots.

Aside from providing extra comfort, these padded collars follow the form of your

happens water cannot infiltrate the boot.

Our determination to stave off the elements doesn't stop there.

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These soles are then permanently bonded to the uppers utilising one of Timberland's many patented processes.

We even add fibre glass shank along the base of the boot for extra strength.

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So we comb the country in search of tanneries that understand the importance we attach to the well-being of your feet.

A task made harder by the fact that we're not just picky, we're plain contrary.

We want leathers that are tough yet soft. Strong yet supple. Long-lasting but good-looking. A tall order, we know.

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Once in the workshops, the leathers are impregnated with silicone.

This prevents them drying or cracking with age. It also stops water seeping through. (There we go again.)

We also subject them to a machine called a Maser Flex, which tests waterproof leathers. Ours withstand 15,000 flexes, equal to the highest standards demanded by the US Military.

The same mentality that puts fake fur inside a boot can be counted on to compromise in other ways too.

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We dye our leathers right through so the colours won't scuff or flake off even after years of regular use.

We use solid brass eyelets. And D-rings made from stainless steel. Neither of them rusts, it's as simple as that.

Laces are made from self-oiling raw hide for extra flexibility. Or premium grade nylon when greater strength is required.

Nothing is over-looked in our desire to build a comfortable, long-lasting boot that protects your feet from the cold.

You may never experience temperatures as low as 20° or 30° below.

But if your feet are soaking wet and numb, who's counting?

Timberland 

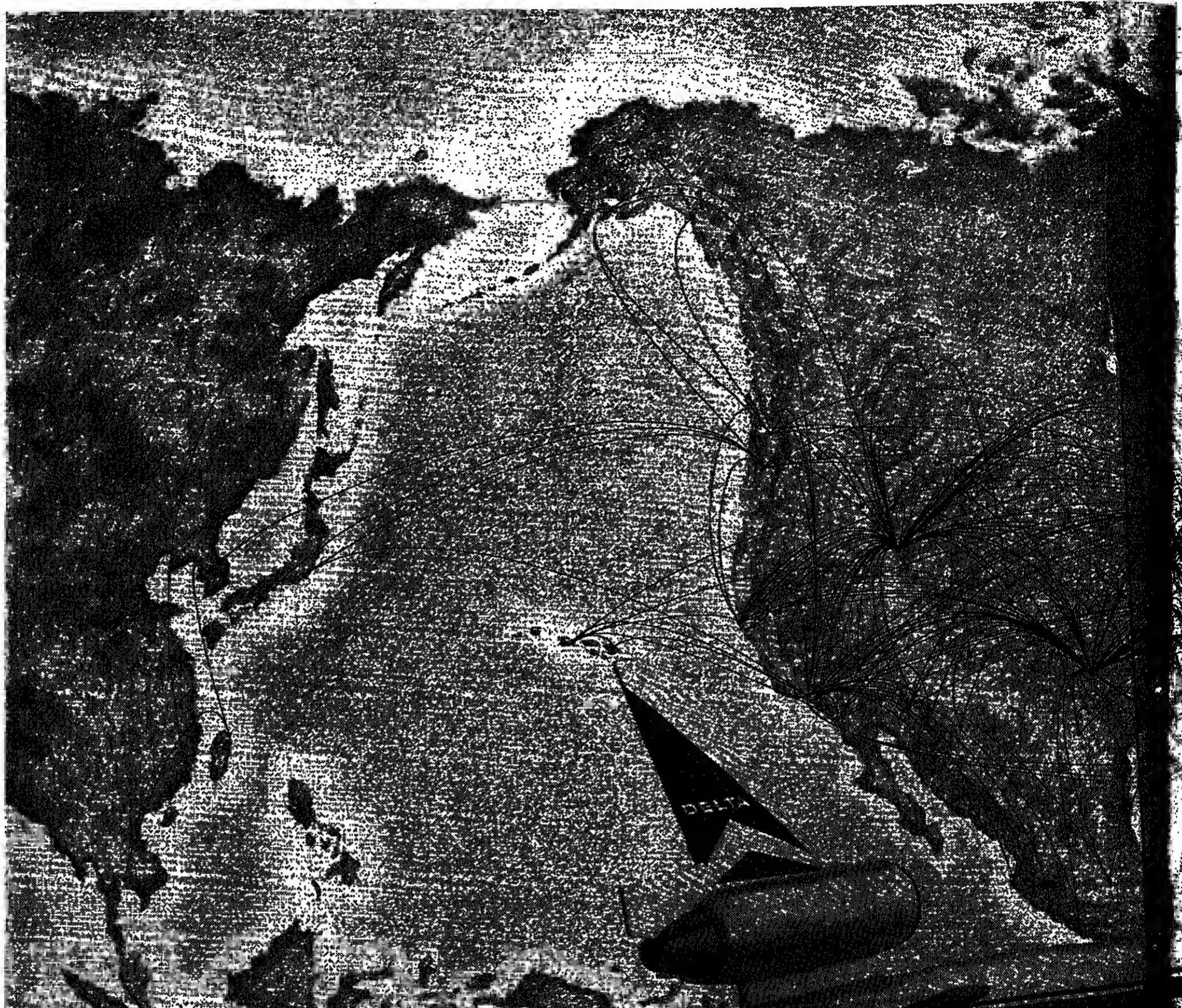
This advertisement was created by Legas Delancy.

THIS INSIDE of a boot is hardly the most promising of subjects. But this advertisement got you into it. Notice also how effortlessly it dispels our assumption that feet are better off in fur. This is what the written word can do. It builds bridges between products and people. Gets the message over fast and effectively. Timberland shoes used to be cultish. One newspaper campaign later, their name is on everyone's feet. Take a big step forward. Advertise in the newspapers.

This advertisement was placed by the Newspaper Publishers Association.

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From left, Delta Flight Attendant Bonita Caringola, First Officer Timothy Therrell, Captain Larry Bacon and Flight Attendant Stephanie Allen.

On November 1, the world will become smaller, and the atmosphere warmer as Delta Air Lines begins greatly expanded operations across Europe, the Middle East and Asia.

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to our exis-
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New routes subject to government approval. Start date of service may vary from November 1-5. *Based on consumer
complaint statistics compiled by the U.S. Department of Transportation. © Delta Air Lines, 1991.

TECHNOLOGY

The portable computer market is "a natural for Apple Computer" claims John Sculley, Apple chairman and chief executive. With the introduction yesterday of three "Macintosh PowerBook" notebook computers, Apple has spearheaded an ambitious bid to become the notebook personal computer market leader.

"We are not saying that we are going to get there in a year, it may take us a while, but that is the objective that we have set," Sculley says. Apple's Macintosh technology, with its graphical user interface and ease-of-use features, is particularly well suited to the portable computer sector, he maintains. "If there was ever a product where ease of use should be a great advantage, it must be in the computer that you carry around with you."

Apple faces formidable competition, however, as a late entrant into an already crowded market dominated by manufacturers of IBM-compatible notebook computers such as Compaq Computer and Toshiba. International Business Machines has also introduced a notebook computer and as many as a dozen other computer manufacturers are expected to weigh into the notebook sector before the end of the year.

Notebook computers represent one of the fastest growing segments of the computer industry, with worldwide sales expected to top 4m units this year, up from less than 3m in 1990, and reach nearly 8m units by 1994. By the mid-1990s, portable computers may account for as much as 50 per cent of the personal computer market according to market analysts.

Prices, however, have tumbled over the past year and discounting is widespread, reflecting generally sluggish market conditions that have prompted personal computer manufacturers to try to boost sales of portable models to make up for slowing shipments of their desktop products.

"We knew when we started developing the PowerBooks that if we were going to do more than catch up, and really kick into the notebook market, we would have to be able to compete on price," says Sculley. "From the very beginning we designed these products so that we could sell at very aggressive prices and still make money."

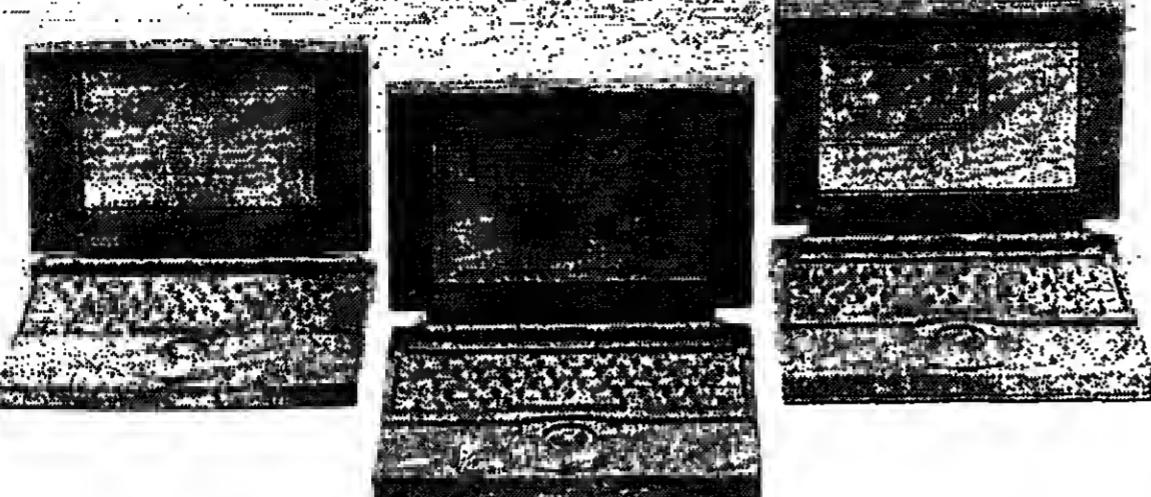
US list prices for the Macintosh PowerBooks range from \$2,300 for a model 100 with 2 Mbytes of memory and a 20 Mbyte hard disc drive to \$4,600 for the top of the line model 170 with 4 Mbytes of memory and a 40 Mbyte hard disc drive.

Sculley maintains, however, that the Macintosh PowerBooks incorporate different features from previous Apple products. "Because we are the only personal computer company that does hardware and software designs we can really make both complement each other, and we have probably never done a better job than we have with the PowerBooks," he claims.

The PowerBooks incorporate the

Louise Kehoe examines the US computer company's bid to become the market leader in notebook PCs

Three new Apples fall from the tree



Apple's new crop of computers (left to right): the PowerBook 100, PowerBook 170 and PowerBook 140

same graphical user interface as desktop Macintosh models, and can run all Macintosh applications programs. Adapting the Macintosh technology to portable computers posed significant design challenges, however.

The computer "mouse", used with Macintosh computers to control movement of the pointer on the computer screen, has been replaced with a built-in "trackball", centred below the keyboard, which – with some practice – can be manipulated with the thumb without lifting the fingers off the keyboard.

With its PowerBooks Apple has introduced an innovative keyboard design with an integral palm rest. The keyboard occupies the back half of the unit, rather than being at the front as in most portable computer designs.

Apple consulted with several ergonomic and medical experts on the keyboard design and the company believes that it has come up with a design that is more comfortable and enables users to keep their wrists in a "neutral" position, avoiding the flexion that some studies have identified as a risk factor in the development of repetitive strain injuries.

In addition, the Apple designers say that the palm rests incorporated in an

Apple's PowerBook keyboard facilitate "micro pauses" resting the hand during periods of typing that reduce stress on the user's hands, arms, shoulders and neck.

Even when perched on the lap, or set in the confines of an airline seat, the PowerBook can be used without cramping the fingers over the key-

The failure of the Macintosh Portable was "like a good cold shower" that awakened Apple to the need to accelerate its product development efforts

board in an awkward position.

The weight and size of the Apple notebooks is comparable with that of competing products. The smallest version of the PowerBook, the model 100, weighs in at 5.1 pounds, equipped with 2 Mbytes of internal memory and a 20 Mbyte hard disc drive. But the model 100 lacks a built-in floppy disc drive, and an internal modem is an optional extra.

The model 140 has a built-in floppy drive as well as either a 20 Mbyte or 40 Mbyte hard disc drive. It also has a slightly bigger screen and weighs 6.8 pounds. It will be priced in the US at \$2,900 to \$3,500 depending upon memory and drive configurations.

The top-of-the-line model 170 features an active matrix display, which gives improved contrast and a broader viewing angle than the liquid crystal displays used in the lower-priced models.

It comes fully loaded with 4 Mbytes of memory, a floppy drive, a 40 Mbyte hard drive and an internal modem for \$4,600.

By launching three notebook models at once, Apple has demonstrated its determination to become a major participant in the portable computer market. If Apple is successful, however, it will be a case of "third time lucky".

Apple's first effort to produce a portable computer was in the early 1980s, when it promised a carry-along version of the Apple II. Eventually, Apple introduced the Apple IIc, a compact desktop model that lacked an integral display unit.

The "Macintosh Portable" announced two years ago was supposed to launch Apple into the laptop market with IBM promises.

computer market, but its weight and bulk proved unpopular.

A high price tag, in part due to the incorporation of leading edge display technology, was its downfall. Apple this week officially withdrew the product.

The failure of the Macintosh Portable was "like a good cold shower" that awakened Apple to the need to accelerate its product development efforts, "to get products out faster and at much lower cost," says Sculley.

Eight months ago, Sculley took charge of Apple's product development himself and adopted the title of chief technical officer. One of his first decisions was to seek outside help from Sony, a long-time supplier to Apple of displays, disc drives and other components.

Sony is manufacturing the PowerBook 100 on Apple's behalf. The Japanese consumer electronics giant also played a leading role in the development of the Apple product.

"It was a question of how many things we could undertake at one time," Sculley recalls. While Apple's own product development groups were focusing on the "start from scratch" projects of designing what were to become the PowerBook 140 and 170 models, Sculley saw the need for a lower-priced entry-level notebook model.

The Sony-Apple alliance, known within Apple as the Asahi project, began in June 1990 when Apple presented Sony with a "half-page specification" based upon the architecture of the Macintosh Portable.

Much give and take and many thousands of miles of travel later, Sony recently began manufacturing the PowerBook 100 at its plants in Japan and San Diego, California, last month.

The Apple-Sony alliance "is an indication that Apple is going to expand its role in the personal computer market, to move out of the sandbox on to the beach, the company will have to have more partnerships with companies that we trust and respect," says Sculley.

He is, however, quick to refute suggestions that Sony may expand to become comparable with the company's recently announced alliances with

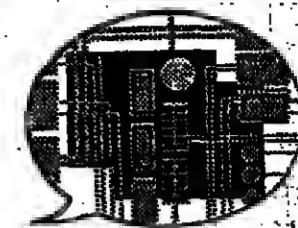
IBM. "We have a fine relationship with Sony, but the relationship with IBM is seminal, there will be nothing that compares with it in the 1990s," the Apple chairman stressed.

While Sony is helping Apple to achieve its immediate goal of staking a claim in the notebook computer sector, IBM has become Apple's strategic partner in a long-term bid to create the dominant personal computer architecture of the 1990s and beyond.

For Apple, however, the Macintosh PowerBooks are not just interim products. Apple recognises that it must quickly become a major force in the notebook computer market if it is to be capable of fully exploiting the opportunities that its new relationship with IBM promises.

The missing link at CTCs

By Andrew Adonis



TECHNICALLY SPEAKING

base packages adapted to language courses.

It is not all science, video and word processing, however.

"Enrichment activities" to use CTC jargon, are integral to the curriculum, and include employer placements, citizenship, physical education, clubs, art and music.

The last is taken more seriously than in many state schools these days: Hackers' Hatchet CTC, in New Cross, offers free introductory courses of 10 lessons in the full range of instruments, and has some funds available for pupils showing promise but unable to pay for subsequent tuition. Most CTCs schedule enrichment activities for an hour after the end of lessons on a few days a week.

For one CTC which opened last month, the arts are the core curriculum. Britts, in Croydon, south London, is the first "City College for the Technology of the Arts". Catering ultimately for 750 14- to 18-year-olds, it concentrates on the technology of the performing arts – recording, broadcasting, lighting, choreography, theatre management, and so on. "We're not interested in people with masses of tap dancing certificates," says Colleen Huie, Britts' marketing director. "We want people with a keen interest in performance and technology." And they are expected to work hard at it: the school day extends from 8.30 am to 5 pm (1 pm on Fridays).

Are CTCs about to transform the national curriculum? Several of their principals would like to think so. But to date Her Majesty's Inspectorate has reported on only one CTC, Kingshurst in Solihull, and the inspectors were highly critical of its teaching in one area above all – technology.

Treuhandanstalt

Branch Frankfurt/Oder



Second Tender for the sale of companies in the eastern region of BERLIN/GERMANY

Treuhandanstalt Branch Frankfurt/Oder herewith announces the tender for the sale of presently wholly owned companies in the region East of Berlin/Germany, between Berlin and Poland, as listed below
(in brackets: type of business, present number of employees and real estate in 1000 square meters):

Civil Engineering / Construction

Bauleitungs GmbH Müncheberg
O-1272 Müncheberg
(windows / 20 / 20)
Bauhütte Schwedt GmbH
O-1330 Schwedt
(construction, reconstruction / 85 / 14)
Baureparaturen Wenditz GmbH
O-1292 Wenditz
(civil engineering, construction / 12 / 20)
Bauunternehmen Oder-Spree Marketing und Bauserv. GmbH
O-1200 Frankfurt (Oder)
(civil engineering, construction / 2007 / 840)

Hochbau Frankfurt (Oder) GmbH
– Bauunternehmen Oder-Spree –
O-1200 Frankfurt (Oder)
(construction / 777 / 364)

Ingenieurbedarf Eberswalde GmbH
O-1300 Eberswalde-Finow
(civil engineering, water engineering / 435 / 68)

Kreisbau GmbH Beeskow
O-1230 Beeskow
(civil engineering / 17 / 10)

Märkische Bau AG
O-1213 Wriezen
(civil engineering, construction / 941 / 449)

Märkische Gebäudetechnik GmbH
O-1262 Hennickendorf
(sanitary installation / 360 / 88)

STREBEDT Ingenieurhochbau GmbH
O-1300 Eberswalde-Finow
(construction / 388 / 91)

Templiner Tiefbau GmbH
O-2080 Templin
(civil engineering, construction material trade / 78 / 63)

Tief-, Wasser- und Ökobau GmbH
O-1310 Bad Freienwalde
(civil and water engineering / 845 / 264)

Construction materials

Bad Freienwalder Feuerfest-Werke GmbH
O-1316 Bad Freienwalde
(fireproof ceramics / 279 / 14)

Betonwaren- und Vertriebs GmbH
O-1220 Eisenhüttenstadt
(concrete stones / 86 / 134)

Oder-Spree Betonfertigteilwerke GmbH
– Bauunternehmen Oder-Spree –
O-1220 Eisenhüttenstadt
(concrete elements / 358 / 310)

Architektur- und Ingenieur-Consult
Eisenhüttenstadt GmbH
O-1220 Eisenhüttenstadt
(civil consulting engineers / 98 / 6)

Ingenieurbüro Metallbau
Eisenhüttenstadt GmbH
O-1220 Eisenhüttenstadt
(steel construction consulting / 7 / 0)

Design-Frankfurter Werkstätten GmbH
O-1200 Frankfurt (Oder)
(advertising / 5 / 0)

Dienstleistungs-GmbH

O-1300 Eberswalde-Finow
(electrical appliances trade / 193 / 24)

G. Schröder-Schuh-Wohnungs GmbH
O-1330 Schwedt
(housing administration / 5 / 0)

Versorgungs- und Gemeinschaftseinrichtungen GmbH
O-1200 Frankfurt (Oder)
(heating power station, railroadcenter / 14 / 33)

Wood / Furniture

Märkische Holz GmbH
O-1291 Neuhardenberg
(interior wood installations / 89 / 15)

Möbelwerke Frankfurt (Oder) GmbH
O-1200 Frankfurt (Oder)
(furniture / 403 / 63)

Armaturenwerk Kietz GmbH
O-1211 Kietz
(brass pieces / 21 / 2)

Blechpackungswerk Eberswalde / Britz GmbH
O-1206 Britz
(packaging / 4 / 87)

CTA Apparaturen GmbH
O-1240 Fürstenwalde

Fahrzeug und Maschinen GmbH
O-1301 Lüdersdorf
(agricultural machine maintenance / 28 / 23)

Finnow-Stahl GmbH
O-1300 Eberswalde
(steel and alu construction, steel ropes / 67 / 8)

FORST maschinen-geräte-service GmbH
O-1300 Eberswalde-Finow
(forestry machines / 21 / 15)

Mechanische Fertigungs- u. Vertriebs GmbH
O-1201 Friedrichswalde
(general metal working / 20 / 10)

MsTec GmbH
O-1291 Ahrensfelde
(general metal working / 19 / 0)

Biomodels GmbH Schönwalde
O-1291 Schönwalde
(breeding of laboratory animals / 27 / 31)

Elektromechanik Lychen GmbH
O-2083 Lychen
(electrical motors / 101 / 23)

Prenzlauer Glasverarbeitung GmbH
O-2130 Prenzlau
(window glass construction / 16 / 3)

Rationalisierungs- u. Maschinenbau

GmbH
O-1200 Frankfurt (Oder)
(general machine construction / 68 / 16)

Foodstuffs

Frisch ei Bemai GmbH
O-1291 Blumberg
(eggs, poultry / 63 / 1023)

Fürstenberger Fleischwaren GmbH
O-1220 Eisenhüttenstadt
(meat slaughtering and processing / 549 / 45)

Mühlenwerke Möllrose GmbH
O-1250 Möllrose
(grain mill / 90 / 67)

Wriezener Getränke GmbH
O-1313 Wriezen
(softdrink trading / 43 / 4)

Animal feed

Biesenthaler Mischfutter GmbH
O-1295 Biesenthal
(animal feed products / 92 / 39)

Frankfurter Kraftfutterwerk-Ges. mbH
O-1200 Frankfurt (Oder)
(animal feed products / 42 / 12)

Specialty food

Biomodels GmbH Schönwalde
O-1291 Schönwalde
(breeding of laboratory animals / 27 / 31)

Elektromechanik Lychen GmbH
O-2083 Lychen
(electrical motors / 101 / 23)

Prenzlauer Glasverarbeitung GmbH
O-2130 Prenzlau
(window glass construction / 16 / 3)

Tender conditions:

FT LAW REPORTS

Writ can be served by agreement

KENNETH ALLISON LTD v
A E LIMEHOUSE & CO
House of Lords
Lord Bridge of Harwich, Lord Templeman, Lord Goff of Chelmsford, Lord Jauncey of Tullichettle and Lord Lowry
October 17 1991

A WRIT may be effectively served on a defendant to contractual or non-contractual litigation if served, not in accordance with the Supreme Court Rules, but in the manner and at the place agreed between the parties, irrespective of whether they are agreed for the purpose of that particular litigation, or as part of a wider agreement relating to disputes between the parties in general.

The House of Lords held when allowing an appeal by the plaintiffs, Kenneth Allison Ltd, from a Court of Appeal decision (Lord Donaldson MR dissenting) that a writ had not been duly served by Allison on the defendant, A E Limehouse & Co.

LORD BRIDGE said that Limehouse were chartered accountants. On October 5 1987 Allison issued a writ against them claiming damages for negligence in carrying out an audit.

On October 4 1988, the last day of the currency of the writ, a Mr Swann attended Limehouse's offices to serve the writ.

The receptionist called the senior partner's personal assistant, a Mrs Morgan, to the reception area. Mr Swann showed her the writ.

She told him she would have to refer the matter to a partner. She left him in the reception area and went to speak to a partner, Mr Hall, who told her she might accept the writ.

Mrs Morgan returned to the reception area. She told Mr Swann she had been authorised to accept the writ. She received from him a sealed copy of the writ and a form of acknowledgement of service.

Limehouse applied for an order setting aside service or declaring that the writ had not been duly served. The application was dismissed by Mr District Registrar Rutherford, but allowed on appeal by Mr Justice McCullough. Allison's appeal was dismissed by the Court of Appeal, Lord Donaldson MR dissenting.

Allison now appealed.

The question was whether the Rules of the Supreme Court relating to service constituted an exclusive code for effective service, or whether, if parties agreed on a mode of service outside the Rules, service in that mode ("consensual service") would be effective.

RSC Order 10 rule 101 provided that "a writ must be served personally". Sub rules 1(3) and (4) provided for service by post or through a letter box or on a solicitor.

Order 6 rule 2 provided that "personal service . . . is effected by leaving a copy of the document with the person to be served".

Where, as here, partners were sued in the name of a firm, Order 6 rule 3 provided that the writ might be served on any one or more of the partners, or by post to the principal place of business or on any person having control or management of the partnership business there.

Mr Vallance for Allison submitted that the writ was served personally on Mr Hall.

That was not accepted. Personal service required that the document be handed to the person to be served.

It followed that Mr Vallance must rely on Mr Hall's express authorisation to Mrs Morgan to accept service on his behalf, which was communicated to and acted on by Mr Swann when he handed the writ to Mrs Morgan.

The relevant decisions were in relation to the 1885 Rules, which provided by Order IX rules 1 and 2 that the court might order substituted service where a plaintiff was unable to effect prompt personal service.

By rule 101 serves out of the jurisdiction was allowed in a contract case "unless the defendant is domiciled or ordinarily resident in Scotland or Ireland".

In *Montgomery*, Jones & Co/1989 1 QB 487 a contract between an English company and a Scottish company provided that for the purpose of legal proceedings service on the Scottish company might be effected at the London Corn Trade Association.

Counsel argued that service was not valid unless effected according to the Rules. The Court of Appeal held that there was nothing in the Rules to prevent the parties from agreeing the manner of service.

Mr Dowley for Limehouse accepted that *Montgomery* was

correct but submitted that the principle must be limited to cases where agreement as to mode of service was embodied in a wider contract and provided for institution of proceedings relating to that contract.

It did not apply, he submitted, to an *ad hoc* agreement made in relation to other contemplated proceedings.

There was no good reason in principle for making that distinction.

If the rules in force in 1885 did not prohibit parties in the contemplated litigation from agreeing between themselves, there was no ground for saying that an *ad hoc* agreement specifically relating to mode of service would, at that date, have been any less effective than an agreement embodied in a wider contract.

No doubt if the present case had come before the court in 1885, validity of the service would have been affirmed.

The question was whether subsequent changes in the Rules had introduced a prohibition on consensual service.

In 1920 a new rule 2A provided that parties to a contract might agree that the High Court should have jurisdiction on that contract and that service might be effected within or outside the jurisdiction in any specified manner.

It was a formal adoption and an extended application of the Montgomery, Jones principle.

The 1962 revision substituted Order XI rule 2A for rule 3, which provided that where the High Court had jurisdiction to hear a contract case and the parties had agreed that a writ might be served in a specified manner and it was served in accordance with the agreement, then "notwithstanding anything in rule 1(1) . . . the writ shall be deemed to have been duly served".

Order 10 rule 3 of the 1985 revision provided that where a contract contained a term that the High Court should have jurisdiction and provided that that process might be served in a specified manner, service in accordance with the contract "shall . . . be deemed to have been duly served".

On those facts Limehouse would be estopped by convention from thereafter contending that there was not good and effective service.

For Allison: Phillip Vallance QC (Gregory Rouscliffe & Milner).

For Limehouse: Dominic Dowley (Pinson & Co).

Rachel Davies
Barrister

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Further information please contact:
Leonard Curtis & Co, Chartered Accountants,
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Tel: 071-262 7700 Fax: 071-723 6059

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□ Current term contracts with the principal Petro-chemical companies and fabrication yards in the North West.

□ Highly skilled workforce.

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For brief particulars of sale please apply to the Joint Administrative Receiver T. F. Ernst & Young, Provincial House, 37 New Walk, Leicester LE1 6TU.

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For further information, please contact the Joint Administrative Receivers N. J. Hamilton and W. S. Martin, Ernst & Young, Lowry House, 17 Marble Street, Manchester M2 3SW. Tel: 061-953 9000. Fax: 061-834 7117 or the Consultant Surveyors retained by the Receivers, J. Trevor & Sons, Barnett House, Fountain Street, Manchester M2 2AN. Tel: 061-228 6752. Fax: 061-236 8306 identifying which package(s) you require.

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★ 25 employees.

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Sculpture married to architecture

William Packer reviews Anthony Caro

At 67, Anthony Caro is now generally acknowledged as pre-eminent in his field, the one British sculptor of unquestioned international authority and reputation. Since the death of Henry Moore five years ago, whose assistant he had been in the early 1950s, he has stood quite alone, and indeed bestrode his narrow world long before that. If Moore was over the old King in his castle at Much Hadham, Caro was Prince Hal, commanding his own generation, creating the new order, setting the pace.

Yet it all happened for him very quickly. The Tate bought its first Caro, a figurative work of the mid 1950s, in 1959. A year later he was back from a first visit to America already the friend and colleague of his new-found American peers, most especially the critic, Clement Greenberg, the sculptor, David Smith, and the painter, Kenneth Noland. He began at once to make welded-steel sculpture of an uncompromisingly abstract, and as such was soon famous. Major one-man and group exhibitions followed in close order, culminating in 1968 in the retrospective that was the Hayward Gallery's inaugural exhibition.

Since then, surprisingly, while the career has prospered wonderfully at home and abroad, the Tate, though continuing to acquire examples of his work throughout, has waited until now to offer him a significant solo exhibition. Thus *Sculpture towards Architecture*, which fills the long central axis of the Tate with a mere four works (until January 26, sponsored by KPMG Management Consulting), is necessarily an event of considerable interest and even importance.

Small wonder then that others should take their chance to mount pendant shows: Anny Juda Fine Art (23 Dering Street W1; until November 20), and Andre Emmerich (41 East 57th Street, New York; until November 16) show works from the recent *Cascades* series in tandem; and Knoedler (22 Cori Street; until November 16) has two large pieces of 1974-75.

Caro has long professed, indeed demonstrated his interest in the consonance between sculpture and architecture. He has done so not merely by simple reference through the inner structures and integral order of the works themselves, but often in the most direct and practi-

cal of ways, working closely with architects from the outset of any particular project. What the Tate has offered him is the chance to work on a scale not merely architectural but monumentally so.

The high colonnaded neo-classicism interior of the Tate's Duveen Galleries offer a challenge which Caro has met head-on. In the central octagon, with his own *Octagon Tower: Tower of Discovery*, a wonky swirling edifice that the visitor may climb, with some care, to view the long halls far below. He has made several such overtly architectural pieces in recent years, redolent of stacks and tree-houses, albeit of heavy metal! This one also carries clear hints at Titian's Tower and Boccioni's futurist figures, for Caro is much given to art-historical allusion.

But if the tower is immediately the more striking, the more massive is *After Olympia*, some 25 yards long, made in 1987 in conscious paraphrase of the west pediment of the Temple of Zeus, now in the Olympia Museum. It is long, low and narrow and would be in high relief were it set in its natural position on the Temple front. The other works, *Night Movements* - four free-standing related elements of 1990 and *Xenadu* - a kind of metal hedge or fence of 1988 - suggest as they are, seem small by comparison.

But all of them demonstrate Caro's remarkable formal command of his material, his compositional dexterity and assurance, his unfaltering lightness of touch and wit. The intractable steel is bent, folded, cut like butter, the particular off-cut, fragment, remnant, picked up and put in its place, just so. Such facility is enviable, indeed amounts to true quality, but it remains a formal quality. And it is here that we enter a more debatable territory.

For Caro came into his own by his rejection of an openly subjective and personal expression in favour of something infinitely more remote, impulsive, cerebral. All his figurative reference was given up and the viewer might bring with him, in terms of a scale with which he might identify, and the spaces and structures he might move through and around in his imagination-like architecture. Quite why Caro felt the need to make this rejec-

tion, with its infinitude of emotional

response and possibility, which Moore, his sometime mentor, could never make, who would say?

All one can say is that formalist principles were in the air. The time was ripe for such a move, and Caro was by no means the only one making it. Figurative or abstract, the common move was away from unity and discomposing expressionism, with Andy Warhol quite as much a fellow traveller as any Noland, Stella or Anthony Caro. And the problem with Caro, as with all those others, is that he has been engaged in an alternative yet inhibited withdrawal from that common theoretical position ever since.

He would still have it both ways, vacuously restating the very idea that his works are about anything other

ARTS



'Octagon Tower/Tower of Discovery', 1991, by Anthony Caro: one of four monumental pieces currently at the Tate

Die Walküre

THEATRE ROYAL, GLASGOW

The new Scottish Opera *Ring* reached its second part on Saturday, with a *Walküre* that to our enthralled ears and eyes opened new worlds of colour, fantasy, narrative illumination and new routes of approach to Wagnerian music-drama. A few moments when it failed to follow the producer's intent - for instance, his presentation of the Valkyries as purple-clad, high-wimpelled witches on stilts, which seemed unusually at odds with the music - I was still swept along by the exhilaratingly free-spirited theatricality of the show.

In new ways this low-budget *Walküre* creates and sustains epic dimensions (so painfully lacking in the Royal Opera's time-tunnel *Ring*). That the Wagnerian lyric theatre can be again a place of fantasy, as it was in the Bayreuth heyday of Wieland Wagner hot has been very seldom since, is asserted with confident authority by the Scottish Opera production team. They and their intelligently chosen cast achieve this no less by telling the story with close accuracy, and by beaming fresh light on the characters (the sequence of glances, nervous, embarrassed, then frankly amazed, exchanged by Siegmund and Sieglinde is a marvellous example). The baggage of heavy-breathing ideology is thrown out; the Wagnerian vehicle moves forward with new fleetness of foot; but the intellectual seriousness of the whole journey can hardly be over-emphasised.

That's far, far too protracted a building-time-schouc. For without doubt this is proving the era's trend-setting *Ring*, in this country and perhaps even elsewhere, and in spite of all the company's current monetary agonies, ways must be found for Scottish Opera to move faster ahead on the project, freely and without delay.

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The success of that *Rheing*

Tuesday October 22 1991

Some Angst in Germany

WHEN the collapse of communism propelled together the two unequal halves of Germany last year, it was clear that unification would bring opportunity and challenge in equal measure. The scale of the adventure has exceeded both the expectations and the initial problem-solving capacities of Chancellor Helmut Kohl's government. Germany still needs to find a consensus for shouldering the political and economic costs of unity if the process is to be brought to a successful conclusion.

Economic and social conditions in the new Germany are a great deal more polarised than in the old Federal Republic. One illustration of the strain comes from the spate of attacks during the last few weeks on temporary homes of asylum-seekers. Germany's neighbours and allies may have to accept that the domestic political environment is becoming much less settled and predictable than the one to which they had become accustomed for 40 post-war years.

The greatest force for inequality has, of course, been the legacy of communism in the east. Yesterday's report from west Germany's five leading economic research institutes shows that the post-unity picture of expansion in the west of the country and slump in the east is giving way to a more balanced state of affairs. Gross national product is due to rebound sharply in east Germany next year after a 30 per cent fall in 1990/91.

But the Bonn government should guard against premature reactions of triumph. By the second half of the 1990s, the area east of the Elbe should be one of Europe's fastest-growing regions. Nonetheless, it will probably take another two years at least for east Germany simply to make up the very sharp fall in output lost as an unavoidable result of the shock of last year's introduction of the D-Mark into the region.

Budget swollen
The flows of public sector funds into the east to allay the social costs of this economic dislocation have greatly swollen the German budget. Even for a rich country like the Federal Republic, a fiscal deteriora-

tion on the scale of the past three years cannot be borne for very long before starting to cause severe problems.

In Germany's case, given the D-Mark's pivotal role in Europe, the fall-out inevitably spreads abroad. The whole of Europe has profited from the unification-induced surge of the past two years in the west of the country, now slowing down under the impact of this summer's increases in taxes and the Bundesbank's anti-inflationary monetary tightening. At this stage in the country's economic cycle, it is of vital importance that Germany takes the right measures to prevent the slowdown turning into recession.

Renewed warning

In these circumstances, yesterday's renewed warning from the Bundesbank about the consequences of further large public sector budget deficits and wage inflation pressures was intended to make policymakers take notice. The analysis is all the more disconcerting for having been almost continuously repeated - without much impact - over the past year.

Most west Germans are unwilling to shoulder fresh financial burdens arising from east Germans' desire to accede quickly to western living standards; this reluctance has probably increased during the past year. However, as the Bundesbank indicates, the alternative to moderation in budgetary spending and wage negotiations is higher interest rates or higher taxes - or both. The five economic research institutes yesterday pointed to similar conclusions.

Unless Germany's inflation rate, currently 3.9 per cent, shows clear signs of diminishing, there will be a sizeable risk of fresh Bundesbank monetary tightening. A further increase in Germany's 7.5 per cent discount rate would take it to the highest since 1981. That would put a severe dampener on growth around Europe. The new Germany faces a combination of responsibilities for which it was ill-prepared; it needs to live up to them, in the interest of the whole of Europe. Otherwise, the costs may extend well beyond broken heads in asylum hostels.

Industry puts its case

ANYONE WHO has not followed the debate about British industry may find yesterday's report from the CBI on manufacturing hard to fathom.

Here we have the Confederation of British Industry sweating at the word processor, to argue that manufacturing industry matters, as if the topic were some strange branch of algebra. We are told that manufacturers employ a lot of people (10m, directly and indirectly) and are crucial to the trade balance.

Context, however, is all, because during Mrs Thatcher's reign it was held in some high places that manufacturing did not matter; what counted were internationally tradeable goods and services - the balance between goods and services being of no fundamental importance. As economic theory this may be unassassable; in practice it was a battle ground upon which the proponents of industrial interventionism and laissez-faire clubbed each other senseless.

Some industrialists feared this anti-manufacturing virus had spread to the CBI. A debate at last autumn's conference led to a report which proposes the creation of a national manufacturing council within the CBI, which is a bit like setting up a society for the Virgin Mary inside the Vatican.

On the whole, however, the report's points are made to good educational effect, mixing case studies with argument. This educational role should not be underestimated, given the previously unpublished 1990 Gallup survey showing that youngsters en route for higher education rated industry a less attractive career option than either teaching or the civil service. Only shop-keeping came lower. The CBI is right to conclude that it has a responsibility to do something about industry's image.

Overall performance

When it comes to a policy framework, the starting point is that industry has done well in the 1980s in terms of industrial relations, exports and overall performance, but that with productivity levels 30 per cent below those of west Germany, 35 per cent behind Japan and 45 per cent short of

the world telecommunications industry is in a frenzy of match-making. The leading companies are trying to form relationships which could define the shape of the industry for the rest of the decade.

Many of their negotiations came to a head in Geneva earlier this month, when the industry gathered for a giant trade fair, held once every four years. When the trade fair ended, it was still uncertain who was engaged to whom. Finalising the new relationships may take months.

BT, previously British Telecom, made the first move by inviting Germany's Deutsche Telekom (DT) and Japan's Nippon Telegraph and Telephone (NTT) to join a global alliance, called Syncordia. But no sooner had BT announced the venture than other groups - France Telecom and MCI and AT&T, both of the US - tried to stop the match going ahead. BT's alliance has since been nicknamed Discordia.

This enthusiasm for marriages spanning the globe marks a turning point for the \$300bn telecommunications services industry as it makes the transition from a monopolistic to a more open, competitive structure. For decades, most telecommunications carriers have been state-owned monopolies, while international communications have been run co-operatively by the carriers as an extremely profitable cartel.

In recent years, though, liberalisation has given the telecommunications companies the freedom to expand in foreign markets and, in an increasing number of cases, privatisation has given them the incentive they needed. The industry is now rushing to catch up with other sectors of the world economy which are already operating on a global basis such as car making and chemicals.

The main aim is to form strategic

The main aim is to form strategic alliances to cater for the global communications needs of multinationals - replacing the patchwork of national networks with seamless global networks

alliances in order to cater for the global communications needs of multinationals. The idea is to replace the current patchwork of national networks with seamless global networks.

Unless Germany's inflation rate, currently 3.9 per cent, shows clear signs of diminishing, there will be a sizeable risk of fresh Bundesbank monetary tightening. A further increase in Germany's 7.5 per cent discount rate would take it to the highest since 1981. That would put a severe dampener on growth around Europe. The new Germany faces a combination of responsibilities for which it was ill-prepared; it needs to live up to them, in the interest of the whole of Europe. Otherwise, the costs may extend well beyond broken heads in asylum hostels.

The ferment is similar to that in the telecommunications equipment industry five years ago when national champions were joining forces to create about half a dozen global organisations competing with one another. The restructuring also has parallels with the airline industry where national flag carriers such as British Airways are trying to form alliances to turn themselves into global competitors.

It is not only the structure but the character of the industry that is changing. The sector, previously populated by staid utilities, is coming

to life.

Although the report agrees that low inflation and steady growth in domestic demand are the most important gifts government can lay before industry, it says a continuation of "relatively benign neglect... is unlikely to create a world-beating manufacturing base."

Picking winners

The CBI does not want, it insists, a government trying to pick industrial winners. But it would like the following: lower business taxes; better infrastructure; more effort put into training; a clearer and more cooperative approach to purchasing by government agencies, whether this be the army or the NHS; a variety of specific measures to support the growth, as opposed to the creation of small businesses; and a "refocused" Department of Trade and Industry. The government, it hardly needs saying, has not done well under all these headings.

The CBI's arguments about the government machine, however, lack shape. It complains, for example, that the Treasury is ignorant about industry, that proposes to transfer responsibility for the National Economic Development Office from the Treasury to the DTI. It suggests much of the DTI's regulatory business can be happily despatched to Brussels, but complains that Brussels fails to enforce existing policies evenly. It is not clear what is being said about the Monopolies and Mergers Commission. At the regional and local level, there is commendable enthusiasm for building upon the cooperative, agency structure of the Training and Enterprise Councils, and a well-fighted barb at the administrative confusion which surrounds such projects. There is not, however, a clear proposal on the table.

That the DTI should "encourage government action that will promote the long-run international competitiveness of British business" is unarguable. But the CBI should be capable of more precision than this.

Granada bound

Gerry Robinson, 43 tomorrow, is even younger than Derek Lewis, the man he is replacing as Granada's chief

The telecommunications industry is restructuring to meet global competition. Hugo Dixon on the emerging partnerships

Busy lines all around the world



TELECOMMUNICATION CONNECTIONS

British Telecom Set up Syncordia in US to provide global communications to multinationals MCI

Leading shareholder of Internet I&T partner companies including Deutsche Telekom, France Telecom, Swedish Telecom, PTT Neths. and KDD of Japan which provides data communications services Deutsche Telekom/France Telecom

Set up joint venture to design value-added services Swedish Telecom/PTT Netherlands

Set up joint venture called Unicam to provide global communications to multinationals Cable and Wireless

About to launch Planet via the Global Digital Highway. Planet will provide business services over GDH which will provide global network of fibre optic cables

POSSIBLE LINKS:

BT Talking to Deutsche Telekom and NTT of Japan about taking stakes in Syncordia

Deutsche Telekom

Talking to France Telecom and AT&T of US and MCI about forming alliance to provide global communications services France Telecom

Talking to Deutsche Telekom and to MCI about global communications services

Unicam

Talking to MCI and AT&T about finding a US partner for their alliance Also talking to other Scandinavian and Benelux countries MCI

Talking to partners in Infonet about expanding into voice and image services

needed," he says.

• Mr Bert Roberts, president of MCI, AT&T's most successful rival in the US, he is trying to stop BT forming a link with Deutsche Telekom and NTT. He wants to cement his own global alliance.

Mr Roberts uses two arguments in discussions with DT's Mr Ricke and others. First, that unlike BT and AT&T, MCI does not represent a threat to its partners because it is much smaller. Second, that Syncordia will be on the existing alliance with the Germans and then to bring in one of the leading US carriers as a partner to set up a rival Syncordia.

• Mr Bob Alleo, chairman of AT&T which, even after its break-up in 1984 remains the most formidable force in the world telecommunications industry. He views BT's establishment of Syncordia in AT&T's backyard as an aggressive move. "BT has made no bones about being in US markets," he says.

Mr Alleo's stated goal is for AT&T to generate half its revenue outside the US by the year 2000 when he retires. But he is also ambivalent over how aggressive to be, realising that so long as foreign markets are not fully open, AT&T will need to co-operate with other local telephone companies. "We are all neophytes in the international market and we are all seeing that partnerships will be

other carriers, including the French and the Germans, so that it becomes something like Syncordia. But he is considering other schemes as well: "I have many irons in the fire," he says.

• Mr Haruo Yamaguchi, NTT's chairman. Although it has the largest stock market capitalisation of any carrier, NTT remains something of a sleeping giant in international markets. NTT only runs Japan's domestic network.

There are doubts over whether NTT would be allowed by the Japanese authorities to join one of the alliances because of the traditional separation of domestic and international telecommunications in the country. But, says Mr Yamaguchi: "We are presently studying and considering Syn-

episode on his cv. Marley is the fourth in a series of turnaround operations, he has tackled and his magic is taking longer than expected to work.

It has not gone unnoticed that he gets £281,000 a year from Marley, and has lots of share options but no direct shareholding, whereas the PTC job only pays £37,339 a year.

Spy ring

■ Markus Wolf, ex-head of East Germany's vaunted HVA spy network, has received support from an unexpected quarter. Heribert Hellehroth, former head of the BND, West Germany's intelligence agency, claims the German justice authorities were "entirely wrong" in seeking to put Wolf on trial.

After German unification it was impossible to distinguish between good spies in the West and evil spooks in the East, he said during a weekend TV talk show with Wolf. The latter, out on bail after recently turning himself in to the German authorities, looked suitably appreciative.

For a man whose only photo in the West until 1978 consisted of a fuzzy snapshot taken of him while contacting an agent in Stockholm, Wolf is now instantly recognisable from his frequent appearances in the media.

As deputy head of the hated Ministry of State Security (Stasi) under Erich Mielke (currently on bail), the 68-year-old ex-spy is far from convincing when he claims that he had not known about the Stasi's massive human rights violations. However, a few more testimonies like Hellehroth's and all this could change.

Blackout

■ How many social workers does it take to change a light bulb?

Noe. 12 of them form a working party to write a policy paper "Coping with Darkness".

cordia... Our interpretation is not that we cannot make an investment but that we need to have discussions with our authorities.

• Lord Young, chairman of Cable and Wireless. The company has positions in the main markets: it owns Mercury, the UK's second carrier; controls most of Hong Kong Telecom; has a minority stake in IDC, Japan's second-largest international operator; has shares - along with a series of partners - in a network of fibre-optic cables spanning the world's oceans, and is the fifth-largest US long-distance carrier.

C and W is about to launch Planet, its answer to Syncordia. But, for all the geographical breadth of the company's operations, Lord Young seems aware that they are thinly spread and is anxious to avoid a head-on clash with the likes of AT&T and BT.

• Others. Some of the smaller carriers are concerned that, as the giants form alliances, they could become marginalised. As Mr Vicente Vicario, managing director of Swedish Telecom, puts it: "If you share a stable with a horse and you are a chicken, you had better watch out."

To avoid getting squashed, Swedish Telecom last week pooled most of its international business in a joint venture, called Unicam, with PTT Netherlands, the Dutch state-owned carrier. The two are now seeking to expand the venture to include other Nordic and Benelux carriers with the aim of making themselves attractive enough collectively to sign up partners in north America and the Far East to provide business communications services.

IBM, the world's largest computer group with extensive interests in data communications, is also a possible player. Ms Ellen Hancock, the company's general manager for networking, says she has no intention of being in the "common carrier" business but that she is interested in forming alliances with telephone companies under which they would work together to provide companies with global communications services.

Despite all the negotiations among the carriers, answers to three central questions remain uncertain.

First, what will be the scope of the alliances? Syncordia aims to take over the running of multinationals' internal networks, supplying them with voice, data and video communications. It claims that it will be providing a network which is more integrated, seamless and flexible than anything currently on offer.

But it is still unclear how much Syncordia's services will differ from existing "one-stop shopping" arrangements among the carriers to cater for multinationals' needs. It is also unclear which company would end up controlling the customer if DT and NTT were finally persuaded to join. Would a German customer such as Daimler-Benz be BT's, DT's or the venture's customer?

Second, how aggressive will the carriers be? They are clearly wary of damaging the traditional co-operative arrangements which have given them such a high level of profits, put collectively at \$20bn a year from international calls. As the chairman of one of the carriers puts it: "What BT has demonstrated is the ability to alienate the rest of the club without any practical benefits."

But the carriers also know that the international cartel is crumbling and those who move first stand the best chance of creating the relationships that will ensure success in the longer term.

Third, will the user gain? If a series of competing global alliances emerges from the negotiations, users should benefit from better, more integrated services and from lower prices. But if the alliances result in restricting competition the cartel will simply have succeeded in restructuring itself in a different guise.

OBSERVER



"I find your behaviour offensive, humiliating and a day late."

franchises is over. Shareholders in Marley, the building products group he chairs, must also be hoping that now they will be able to count on his full-time presence.

A former visiting professor at Newcastle University, Russell has sat on boards

inquiring into everything from civil service to local authority business, in addition to holding down a series of top jobs in the private sector. His skilful handling of the TV franchise lottery has proved beyond doubt that the 55-year-old geordie is a safe pair of hands.

But Marley is a company that needs full-time attention and recently Russell has given the appearance of being a part-time boss. The group's profits have fallen from a peak of £70m to £14m last year and will be hard-pressed to top £30m next year.

Admittedly, Marley has been hit by the severe recession in the UK, but Russell's time at the top of Marley has hardly been the most impressive

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A spectacular string of successes has sounded the alarm bells at Rolls-Royce.

Plans about the company's future have grown in recent weeks following the controversial decision of British Airways to abandon its traditional UK aircraft engine supplier on its new Boeing 777 aircraft in favour of General Electric of the US. The BA decision came as a body blow for Rolls-Royce. The company has been struggling this year to win new commercial engines orders in a depressed civil aviation market made all the more difficult by the post-cold war slump in defence orders. It had been banking on BA to give it a much-needed lift at a time when it must win orders worth £100 a day just to tick over, in the words of Sir Ralph Robins, the chief executive.

The company is being forced to reduce its total aerospace workforce of 34,000 by some 5,000 this year. It has already warned there are likely to be more job cuts next year as it strives to lower costs to match its two US competitors, both of which are engaged in sweeping cost-cutting programmes.

Rolls-Royce's pre-tax profits have nosedived by 90 per cent to £100 million in the first half of this year from £1.1 billion for the same period a year ago.

The BA decision to choose General Electric's engines also appears to have had a knock-on effect on other orders. This month, All Nippon Airways, the Japanese carrier, cited BA's rejection of Rolls-Royce as one of the reasons for selecting US Pratt & Whitney rather than UK engines for its new Boeing 777 fleet.

Last week, Rolls-Royce suffered another unexpected reversal when Air India decided to switch a 287m Boeing 747 engine order placed with the UK company a year ago to Pratt & Whitney.

"We must keep our nerves," says Sir Ralph. "The BA decision was a big disappointment but not a killer." He concedes that the company's short-term position is difficult but, with his characteristic self-confidence, he also believes the longer term outlook remains good.

"You can't read the whole market on two or three early 777 decisions," Sir Ralph insists. In spite of its recent setbacks, he argues that the company is now in a far stronger financial position than either at the time of its bankruptcy in 1971 or during the last cyclical downturn in the commercial airline industry 10 years ago.

"Remember we had virtually no market share in the early 1980s. Why should it be more

Engine trouble stalls Rolls-Royce

Paul Betts on the UK company's struggle to win orders in a depressed civil aviation market



Chief executive Sir Ralph Robins with Rolls-Royce-powered 747s: 'We must keep our nerves'

difficult now to maintain what we have gained with our new family of engine products," he adds. During the past 10 years, Rolls-Royce has increased its market share from about 10 per cent to 20 per cent in the commercial engine market, but like its US rivals, it has concentrated into the power generation sector with its acquisition of the NEI. Expanding further, it currently has a firm order book worth £750m.

The recent boardroom turmoil at British Aerospace has also inevitably clouded the spot light on Rolls-Royce. Built in sharp contrast to BAe, the aero-engine maker is not engulfed in a top management crisis; it has not embarked on an adventurous diversification programme, nor is it seeking to raise cash through a distress rights issue. "We have no debt. We don't need a rights issue," emphasises Sir Ralph. "Our strategy is to go through this downcycle with a strong balance sheet. What we are trying to do is fairly straightforward: downsize our military business and make our civil engine operations more efficient."

The company's challenge is whether it can maintain its momentum in the current recessionary environment. Rolls-Royce appears to be suffering from a financial disadvantage. To bang in at the top end of the engine market, it is having to have the same broad customer base as General Electric and Pratt & Whitney. It has built up a strong presence in the smaller to medium size commercial engine market, but like its two American rivals, it has also targeted the development of very large engines through its £300m Trent programme as the spearhead of its future growth.

Big engines have become the chosen battle ground of the three leading aero-engine makers because large capacity aircraft are expected to account for a dominant share of the world airline market during the next 10 years.

Although there are only three players competing for the £100bn market to supply engines for these new jumbos, the stakes are high for the engine manufacturers because of the huge costs and lead times of new engine programmes. As no one holds a decisive technological edge in this three-cornered contest, the battle is now hinging on muscle power in the market place and depth of pocket.

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Although Rolls-Royce appears to have lost the first round in the campaigns to place engines on the new Boeing 777 aircraft, it has been more successful with the Airbus A330, winning 47 per cent of the orders so far for Boeing's European rival in the twin engine widebody airliner market. Rolls-Royce has also placed its Trent on the 777s ordered by Thai International Airways, a traditional General Electric customer.

Rolls-Royce continues to see itself as a wholly independent company. But to expand its market base and spread the financial risks associated with commercial engine programmes, it is expected to speed up its search for partners and risk-sharing alliances in specific projects.

The UK group has recently formed a partnership with BMW, the German car manufacturer seeking to return to its aircraft engine manufacturing origins. But so far the scale of its co-operative ties with other manufacturers falls short of the strategic alliances General Electric and Pratt & Whitney have forged respectively with Snecma of France and MTU of Germany.

In the long run, Rolls-Royce may have to reconsider its "go it alone" approach at the expense of its corporate pride. Many in the industry believe the market for the new heavy aircraft engines is not large enough for three players on account of the development expenditures required to stay ahead of the game.

Ironically, Rolls-Royce broke off five years ago a strategic partnership in the big engine market with General Electric. "The deal did not make enough sense to the company and its customers who wanted to buy Rolls-Royce products at the top end of the market," says Sir Ralph.

With the campaign to supply high thrust engines for the new generation of wide body aircraft only just beginning, it will take at least four or five years before the winners and losers of this multi-billion dollar battle will emerge.

Will there still be room for three leading engine makers? Many believe it would be a logical step for Rolls-Royce to team up eventually with Pratt & Whitney in the big engine market to compete against the GE-Snecma combination. The answer, however, will ultimately be with the airlines.

Joe Rogaly

No regrets — yet



Ideas will be the death of us all. We know that world history is punctuated by religious conflicts. We have just seen that Marxism destroyed entire nations. Now we are threatened by the inherent contradiction between two powerful late 20th century ideas. The first, "let markets rule", currently overshadows the second, which is "growth equals destruction".

This self-destructive perception is hugely important. The world's tribe of nomadic conference-goers is small. Its influence is grossly disproportionate to its size. Within that tribe the clan of economicists is exceptionally powerful. If its witch-doctors do not believe what the environmentalists (themselves a numerous clan) are saying, or what the majority of the world's serious climatologists assert, then our only hope is that the theory of global warming is indeed mistaken.

The best working assumption must be that it is not. What then? The hawkers of

Nobody questioned the necessity for permanent economic growth

energy have a vested interest: to sell more energy. They are aware that the environmental movement has to some degree or another permeated the consciousness of many influential people in the rich countries, but they are struggling, sometimes even against themselves, to resist the conclusions for policy that this implies.

Enter a convenient cop-out: the "no regrets" package. Everyone can buy that. You go for energy efficiency, either by letting the market do its work or, at a push, by allowing governments and international organisations to set standards. The result will be the most cost-effective use of fossil fuels. The growth in energy sales might eventually slow down but, overall, there would be no regrets. The policy pays off even if the warnings about atmospheric damage turn out to be false.

"No regrets" is not without its problems, but it does not interfere with the market or growth and it seems to cost

nothing. If you still harbour a sneaking feeling that more needs to be done you could go in for an insurance policy — say the subsidisation of a global programme of research and development into clean energy and low or zero emission motor vehicles. The work would not be undertaken or directed by governments, but by private agencies. This could be regarded, say the economists, as a lottery. The ticket is relatively cheap; the potential pay-off very large.

Such low-cost insurance plus may not be enough to bring about the net reduction in emissions that the majority of global scientists regard as necessary. Yesterday the UN's environmental agency, working with a couple of dozen assorted allies, called for the industrialised countries to reduce their per capita energy consumption by 1 per cent per annum until the year 2000, and 2 per cent thereafter. Fat chance.

Low energy users, such as China, would be permitted to increase per capita consumption until a certain pre-set level, but not to exceed it. This "Caring for the Earth" report represents a powerful idea, but its strength does not appear to match that of the drive to get richer. The pre-occupation of the Third World is with rapid growth and industrialisation. Even a concerted campaign by all global organisations — from the World Bank to the European Community — is unlikely to ensure that this is "clean" growth unless some cash is involved.

Cash transfers were not a popular topic at the weekend. There were, however, a number of suggestions for tying down rescheduling, or Gatt concessions, to the freeing of markets. As to a tax on CO₂, there was much debate about the European Community's proposed impost of a light-weight \$3 per barrel in 1993, to be increased by a dollar a year until it reached \$10 at the turn of the century. The consensus seemed to be that it was neither desirable, nor likely to work.

It looks as if the iceberg will have to be visible before the brilliant engineers who designed the *Titanic* offer their regrets.

LETTERS

British Coal's efforts to cut costs and preserve markets hit by speculation

From Mr Kevin Hunt

Sir, Recent media speculation that the government's advisers, N M Rothschild, were advocating a reduction to a pitifully small number of pits in order to make British Coal saleable to the private sector has rightly been scotched in your feature "Coal row re-ignites" (October 16).

As Juliet Sychrava points out, the number of pits is still a matter of conjecture and depends on the price, tonnage and duration of the next coal contracts which have yet to be negotiated.

However, the potential damage this speculation causes to our business is considerable — both in terms of morale and in making it harder to sustain our people's efforts to continue the

fight to reduce unit costs and preserve our markets.

You highlight the view of the managing director of a private coal company that British Coal is an institution — and that in private hands the costs at some pits could be cut by 20 per cent. This, from a quarter which may have a direct interest in a sale of British Coal, is frankly insulting. In five years, our managers and our workforce have more than doubled productivity levels. More to the point, we have every intention of continuing that improvement of performance.

Similarly, over five years we have cut real prices to the generators by 40 per cent — and current reductions in capacity are unarguably far and away the

An irrational investment fashion

From Mr William Wallace

Sir, Robert Peston's comment on the flotation of SI ("Risky business may start to play safe", October 14), that its "investment horizons may be shortened when its bank shareholders sell" to life insurance companies and pension funds, touches on one of the most irrational aspects of financial market behaviour in Britain. Why — apart from convention and fashion — should life insurance companies and pension funds take such a short-term view of the companies in which they invest?

Like most of your readers, much of my personal savings is locked up in long-term insurance policies and pension provisions. I am interested in the yield of these savings over a 25- to 50-year period, not in the monthly performance of their "savers" or the short-term profit to be made from above bid premiums.

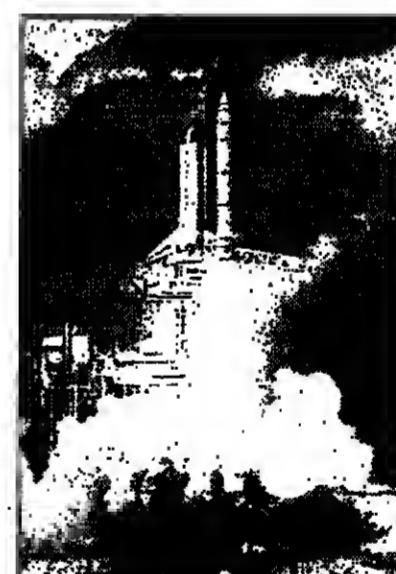
I was shocked to hear the chairman of one of the insurance companies in which I have a policy stating some months ago that he saw no reason for his company to have any long-term commitment to the firms in which it held stakes. Rather, it bought and sold in the market as opportunity offered. This indicates that long-term funds are being used to follow short-term trends, rather than the company playing a part in promoting the long-term growth of the firms in which the insurance community and the pension funds are now such substantial stakeholders.

Mr Peston expresses "anxiety" about the financial institutions' demands for immediate returns rather than long-term growth in their approach to the companies in which they invest. I would add bafflement to anxiety, that these guardians of our savings should prefer to play the markets and demand high dividends than focus on asset growth.

William Wallace,
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INSIDE

Retailer's discount chain puts it ahead

Amber Day, the UK retail group more than tripled the profit last year thanks to its What Everyone Wants discount chain. Its 44 shops in Scotland and the north of England, including six opened during the year, contributed £13.1m (£22.5m) operating profit. Page 30

Newspaper group hit

Southern Newspapers, the UK regional publisher, said pre-tax profits fell to £8.61m (£14.4m) from £15.05m as the recession in the south of England hit advertising revenues during the year to end June. However, Mr John Salkeld, chairman, said the outlook was brighter, with revenues stabilising. Page 30

Americas rediscovered

The Americas were rediscovered by investors last week, coinciding with the US celebration of Columbus Day. Wall Street, Canada and Mexico were three of the best performing markets, according to the FT-Actuaries World Index to rise 2 per cent on the week in local currency terms. Back Page

Small is beautiful for farmers

Very small farms constitute more than 40 per cent of all agricultural holdings in the UK, according to a recently-published study, it produced some odd conclusions. Of the UK's 240,000 holdings, at least 100,000 fall into the very small farm category. They are of negligible agricultural significance, accounting for only 2 per cent of production. Should these be classed as farms at all? Who are these 100,000 small farmers and what do they do? Page 34

Shifting into a faster gear

David Brown, the Hudson-based engineering company which was gear maker to the world for 130 years, has lurched from one financial crisis to the next. Mr Chris Cook (left), who with Mr Chris Brown bought the company for £46m in 1990, said: "Despite 20 years of mismanagement we still have a group which is a world leader with huge underlying strengths in its technology, skills and name." Page 31

Bidding for Australian licence

Kalor Communications, the consortium bidding for Australia's second telecommunications licence, may lose the support of France Telecom and Ameritech and Bell Atlantic of the US. Page 28

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Barclays Bank PLC, New York Branch
Union Bank of Switzerland, Chicago Branch

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Continental Bank NA
Merrill Lynch Money Markets, Inc.
Barclays de Zoete Wedd Securities, Inc.

Arrangers

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Comdisco, Inc.

U.S. \$375,000,000

MULTI OPTION FACILITY

with Letter of Credit Option

Letter of Credit Agent

Barclays Bank PLC

Facility Agent

National Westminster Bank PLC

Issuing and Funding Banks

National Westminster Bank PLC Group
Barclays Bank PLC
Union Bank of Switzerland

Funding Banks

BHF-Bank

Credit Lyonnais, Chicago Branch

Bayerische Hypotheken-und Weschel-Bank AG, New York Branch
Dresdner Bank AG, Chicago Branch
Westdeutsche Landesbank
Norddeutsche Landesbank Girozentrale, Cayman Islands Branch
Banco Hispano Americano SA
Banque Nationale de Paris, Chicago Branch

Arranged by

NatWest Capital Markets

August 1991

This announcement appears as a matter of record only.

Comdisco, Inc.

U.S. \$300,000,000

GLOBAL CREDIT FACILITY

providing optional credit enhancement
for commercial paper

Arranged By:

**Westpac Banking
Corporation**



ABN-AMRO

Letter of Credit Issuing Banks and Lead Managers:

ABN AMRO

Westpac Banking Corporation

Bank of Tokyo, Ltd., Chicago Branch

Citibank, N.A.

National Westminster Bank USA

Managers:

The Yasuda Trust and Banking Co., Ltd.
The Fuji Bank, Limited, Chicago Branch
United States National Bank of Oregon
C&S/Sovran Corporation

Administrative Agent:

Westpac Banking Corporation
August 1991

INTERNATIONAL COMPANIES AND FINANCE

Chase Manhattan makes progress

By Alan Friedman in New York

CHASE Manhattan, the New York bank that has been hard hit by the real-estate slump, yesterday released improved third-quarter results which suggest the bank's policy of slashing costs and restructuring is beginning to pay off.

The bank reported third-quarter net income of \$188m, compared with a loss of \$62m in the same quarter of 1990.

Earnings per share were 79 cents, against a loss of \$0.03 a year ago.

For the first nine months of 1991 Chase achieved \$335m of consolidated net profits, com-

pared with a loss of \$327m in the same period of last year.

Although Chase forecast the improvement earlier this month, Wall Street was nonetheless pleased and marked the bank's share price 3½ higher to \$18.4 in trading yesterday morning.

The Chase results reflect increases in net interest revenues, fee-based income and reductions in bad debt provisions and operating expenses.

Mr Tom Labrecque, chairman, said the bank was encouraged by its progress, which included the acquisition

of two banks in Connecticut and an improved ratio of 4.26 per cent, against 3.56 per cent a year ago. The bank, he said, also exceeded its target of reducing the workforce by 5,000 employees.

The provision for possible credit losses for the third quarter was \$55m, the same as in the second quarter and significantly lower than the \$65m set aside a year ago.

Chase said that if the US economy remained weak in the coming months it could cause the bank to make further sub-

stantial loan-loss provisions during the rest of 1991.

The provision for bad debts in the first nine months of 1991 was \$770m, compared with \$1.1bn in the same period of 1990.

Chase is facing several challenges, not least of which will be the retail banking assault expected when Chemical Bank and Manufacturers Hanover Trust complete their planned merger. The Chase results however, compare favourably with the \$855m loss recorded in the third quarter by Citicorp, the leading US bank.

Unisys narrows loss to \$75.8m

By Louise Kehoe in San Francisco

UNISYS, the financially troubled US computer maker, reduced losses for its third quarter as it continued to consolidate operations to reduce costs and reduce its heavy debt load.

In the third quarter Unisys reported a net loss of \$18.5m, or 66 cents a share. In the same period last year the company suffered a net loss of \$37.5m or \$2.42, including a charge of \$18m for job cuts and consolidation of operations.

Revenue for the quarter was down sharply at \$1.97bn, compared with \$2.40b in the year-earlier quarter.

Third-quarter results for 1991 do not include proceeds from the sale of Timeplex which was sold for \$207m.

"We are encouraged that, in

spite of lower revenue, profit from operations in the third quarter improved and expenses are trending downward," said Mr James Unruh, chairman and chief executive.

Asset sales of more than \$25m were completed in the quarter, raising total cash generated by sales to more than \$55m in 1991.

Unisys reduced its debt by nearly \$400m during the third quarter, Mr Unruh said. The company's debt, net of cash, was now below \$3bn for the first time over three years, he said.

For the first nine months of 1991, Unisys' net loss was \$1.47bn, including a special charge of \$1.2bn recorded in the second quarter, up revenue of \$6.23bn. In the same period a

year ago, the net loss was \$348.3m, including a special charge of \$181m, on revenue of \$7.18bn.

Mr Unruh said that the proposed sale of the company's defence operations through an initial public offering announced last month would "concentrate all resources and management time on Unisys' commercial information systems operation".

He said the company's efforts to lower cost structures to a level below that needed to support conservative revenue projections for 1991 and 1992 were "on schedule".

Worldwide employment in the quarter dropped by more than 6,000, including 2,300 jobs as a result of the sale of Timeplex.

Inco tumbles as nickel prices drop

By Bernard Simon in Toronto

INCO, the western world's leading nickel producer, has blamed sagging prices and lower productivity at its Canadian operations for a 55 per cent slump in third-quarter earnings and a continuing cash shortfall.

Nickel sales have been hit by the US recession. Third-quarter returns were \$344m, up slightly from \$324m for the same period last year.

Although Inco was able to sell more colour televisions and video-cassette recorders this past quarter compared with the third quarter of 1990, its margins were under pressure from the cumulative price reductions made by the industry in recent years.

Zenith invested \$5m during the third quarter in its high definition systems (HDTV), on which it has pinned its hopes to turn the company around.

The US Federal Communications Commission has begun testing HDTV during the past quarter, and the Zenith AT&T all-digital HDTV system is scheduled to start tests in the first quarter of 1992.

Deadline looms in Harcourt Brace offer

By Nikki Tait

REPOLA, Finland's largest listed group, fell deeply into the red during the first eight months of the year. The company reported a loss of FM874m (\$210m) before taxes and minority interest, against a profit of FM175m in the corresponding period in 1990.

The company blamed the loss on lower international demand for forest products and machines, as well as on problems in the national shipbuilding group.

General Cinema had threatened to walk away from the deal if 90 per cent of each five classes of bonds had not been tendered by 8pm yesterday.

The bidder said that by the close of business on Friday it had met this target in respect of only one class of bonds - the 13 per cent senior notes.

Overall, it had received tenders for 91.5 per cent of Harcourt's \$1.85bn in debt securities, only marginally increased on the previous week's tally of 87.4 per cent.

In the past General Cinema has been as good as its word and walked away from situations, including Harcourt Brace.

The deal between the two companies has hung in the balance for many months. The bidder let an earlier offer expire in the wake of opposition from bondholders in April and then came back with the current, revised offer, which has already been extended.

The bidder said that by the close of business on Friday it had met this target in respect of only one class of bonds - the 13 per cent senior notes.

Group investments during the January-August period fell sharply to FM1.36bn, from

FM3.61bn in the year-earlier period.

Consolidated sales also slipped to FM13.92bn from FM15.18bn. Operating profit fell to FM455m from FM1.24bn.

The loss per share was FM6.72.

Mr Tauno Matomaki, president, said he did not expect market conditions for Repola's products to improve during the remainder of this year.

Repola's three industrial groups reported a setback in profitability. United Paper Mills (UPM), Repola's biggest division and Finland's largest forest group, said that its operating profit had fallen to FM82m from FM98m.

Rauma, the group's metals engineering division, and Rosenlew, the plastic packaging arm, reported operating losses.

Southwest Airlines slips to \$15.7m

By Nikki Tait in New York

SOUTHWEST Airlines, the Dallas-based regional carrier which is generally regarded as one of the most promising US airlines, yesterday reported third-quarter profits of \$15.7m, down by almost one-third on the \$23m earned in the same period a year earlier.

Operating profits slipped from \$36.7m to \$31.1m, while non-operating gains of \$2.63m turned into a small loss of \$4.65m. Net interest charges were also higher at \$9.26m, compared with \$8.35m. Revenue were up from \$31.64m to \$35.3m.

Southwest's figures follow the release last week of some stronger-than-expected results from American Airlines.

Southwest noted that "aggressive promotions" had been used to stimulate an otherwise weak domestic travel market, resulting in improved traffic. It said it was also relatively optimistic about the fourth-quarter prospects.

"Bookings for the fourth quarter look very good compared with the same period of 1990," the airline said, although Southwest conceded that, with a "tentative" economy, it was continuing aggressive promotions.

This was expected to push down comparables revenue yields, but Southwest saw the prospect of a favourable load factor and available seat-mile yield comparisons.

DENMARK

The FT proposes to publish this survey on November 26 1991.

54%* of Cibc Executives in Europe's largest companies read the FT. If you want to reach this important audience, along with decision makers worldwide, call

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or write to her at Vimmelskaftet 42A, DK-1161 Copenhagen K, Denmark.

*Data source: Chief Executives in Europe 1990

Up to £100,000,000

Hafnia Holdings (UK) Limited

Floating Rate Notes due 2000

£25,000,000 of which are being issued as the Initial Tranche

For the period from October 15, 1991 to

January 20, 1992, the Notes will carry an interest rate of 10.8575% per annum, with an interest amount of £2,962,641 per £1,000,000 Note.

The relevant interest payment date will be January 20, 1992.

Summins
optimistic
cost-cutting
takes effect

Karen Zager
New York

PORTS to cut costs by paying off engines, one of which had been idle has significantly reduced its third-quarter costs. It expects to have a fourth-quarter profit of \$100 million. Analysts had expected the company to lose \$41 million at mid-year, limiting market share on the three continents. On September 28, the company reported a net loss of \$100 million, down from a share price of \$33.7m, or 10% earlier in the year. Summins' long-term strategy involves a 10% cut in quarterly costs. In the first quarter, company started by streamlining its mid-range engines. It has now moved to reduce costs from suppliers. The company said its quarterly results reflected the weaker market because of weak sales and seasonal engine parts and other components. Although Cummins' break-even point is higher, it has seen significant improvements in markets and sales. The company remains optimistic for the first quarter, which recorded a \$1.8m, or \$1.8 million, profit with a net loss of \$7m, or \$7.4 million. Excluding interest, taxes and other costs, Cummins' profit rose to \$4.4m in the quarter from \$2.4m a year ago. Sales rose 4% from \$2.5 billion in May. Cummins' quarterly dividend has been cut to reduce its earnings.

Profits at Mar
McLennan

BSH & McLennan's largest business yesterday reported tax profits of \$1.5 billion in the last two months to end. In the same period last year, it made a loss of \$1.5 billion. Total revenues were up 10% on a year-over-year basis, from \$1.5 billion to \$1.6 billion. The company's operating profit was \$1.5 billion, up from \$1.4 billion last year. Earnings per share were \$1.50, up from \$1.40.

Notes for investors: Information on the financial performance of the company is available on request. The company's financial statements are available on request.

Bankers Trust

BARCLAYS INVESTMENT FUNDS (LUXEMBOURG)
Société d'Investissement à Capital Variable
("the Company")
Registered Office:
Centre Mercure
7th Floor,
41, avenue de la Gare
L-1611 LUXEMBOURG
R.C. Luxembourg B 31439

NOTICE OF ANNUAL GENERAL MEETING
The Annual General Meeting of Shareholders is to be held at the registered office of the Company on Friday November 15th, 1991 at 11:30am (or as soon thereafter as it may be held) and for the following purposes.

- To receive and adopt the Directors' Report of the Auditor for the period to 31st July 1991.
- To receive and adopt the Statement of Net Assets and the Statement of Profit and Loss for the year to 31st July 1991.
- To grant a discharge to the Directors in respect of their duties for the period ended 31st July 1991.
- To grant a discharge to the Auditors in respect of their duties for the period ended 31st July 1991.
- To re-elect Messrs Dennis, Lane, Pandy and Walmart as Directors of the Company.
- To re-appoint Messrs Price Waterhouse as Auditors.
- Miscellaneous.

Voting Arrangements
Shareholders are advised that in accordance with the Articles of Incorporation the Annual General Meeting of Shareholders will require a quorum of 10% of the shares outstanding.

Proxy Forms
Shareholders who cannot attend the meeting in person are invited to send a duly completed and signed proxy form to the registered office to arrive not later than 12th November 1991. The shares so deposited will remain blocked until the day following the Meeting or any adjournment thereof.

The holders of registered shares need not deposit their certificates but can be present in person or represented by a duly appointed proxy.

Shareholders who cannot attend the meeting in person are invited to send a duly completed and signed proxy form to the registered office to arrive not later than 12th November 1991.

Proxy forms will be sent to registered Shareholders with a copy of this Notice and can be obtained from the registered office.

The Board of Directors

GROUPE MOULINEX

Turnover as at
30th September, 1991

Its Group's sales, which include Krups since January 1991, totalled 5,500 million French francs as at 30th September, 1991.

On a comparable basis (excluding Krups) turnover rose by over 15 %. This increase is attributable mainly to business activity outside France. Sales in France, which account for 20 % of the Group's turnover, rose by 4.8 %.

The Group expects to attain its year-end sales objectives in spite of the fact that the international economy appears to be less active than expected.

Turnover	Including Krups	excluding Krups	%
(in millions of French francs)	1991	1991	1990
Consolidated turnover	5,507	4,389	3,787
Moulinex S.A. turnover	—	3,546	2,783

Telecoms trio expected to drop Australian bid

By Kevin Brown in Sydney

FRANCE TELECOM and Amcotech and Bell Atlantic of the US are expected to withdraw shortly from Kalor Communications, one of two consortia bidding for Australia's second telecommunications licence.

Hutchison Whampoa of Hong Kong, the remaining member of the consortium, is expected to proceed with the bid, but the withdrawal of its French and US partners increases the likelihood that the second licence will be awarded to the rival Optus Communications consortium.

Optus is owned by BellSouth of the US and Cable & Wireless of the UK, each holding 24.5 per cent, and Mayne Nickles, an Australian transport group, with 20 per cent. Australian institutions hold the balance.

The second licence will be awarded to the winning bidder for Aussat, the government's loss-making satellite company. The privatised Aussat will compete with a government-owned carrier formed by a merger of Telecom Australia, the main domestic carrier, and OTC, which handles international traffic.

Earlier this year, the government announced the duopoly would last until 1997, giving the second carrier five years to establish itself before Australia moves to open competition in telecommunications.

Optus has amalgamated as



Kim Beazley: may have to resolve dispute

favourite to win the licence after promising to spend A\$4bn (US\$3.2bn) over five years to provide competitive STD and ISDN access to all Australians, and a digital cellular service to 80 per cent of the population. It says it will achieve a 21 per cent share of the domestic and long distance market for residential and small business customers by 1997, and more than 30 per cent of the cellular market.

Withdrawal of three of Kalor's four partners is embarrassing for the federal Labor government, which needs to demonstrate to opponents of privatisation that it can achieve a high price for Aussat. It follows tortuous negotia-

tions between Telecom Australia and both consortia over the interconnect fee — the price to be paid by the second carrier to access to Telecom's trunk lines.

The level of the interconnect fee is crucial to the second carrier's prospects of viability and to Telecom/OTC's ability to defend its market share against competitors.

Compromise recommendations by Austel, the industry's supervisory body, were rejected by both consortia, but neither has been unable to reach agreement with Telecom, raising the prospect that Mr Kim Beazley, the communications minister, may have to resolve the dispute.

Kalor's US partners are thought to have concluded there was little prospect of profitable investment in Australia, partly because of the government's plans to move quickly to open competition.

Both companies are part owners of Telecom New Zealand, which was privatised earlier this year, but are understood to have identified few opportunities for synergy between the two countries.

Hutchison said it would table a bid for Aussat by the government's deadline of November 8 and indicated it would announce a strategic link with an overseas manufacturer of telecommunications equipment.

Kao warns of slower domestic growth

By Robert Thomson
in Tokyo

KAO, the Japanese household products and cosmetics maker, unveiled a 4.5 per cent increase in pre-tax profits to Y19.9bn (US\$1.2m) for the first half to end September.

It indicated, however, that the "clear signs" of slower domestic economic growth were likely to result in a modest increase in sales for the remainder of the year.

Sales for the first half rose 3.4 per cent to Y286.5bn, but Japanese companies have generally become more pessimistic about second-half sales, having previously expected a sluggish economy to regain momentum.

Department store sales remain weak, although the downturn is not expected to be deep enough to affect severely the sales of daily use goods.

Kao's sales of personal care products and cosmetics rose 3.7 per cent after the introduction of two new shampoo lines, while sales of household laundry and other cleaning products increased by 3.3 per cent, and those of hygiene and other products were 2.7 per cent higher.

Chemical product sales rose 5.3 per cent, in spite of the softness in important customer areas, such as the auto industry, construction, and paper and pulp. Sales of fatty chemicals rose 9.7 per cent, and sales of specialty chemicals and floppy disks were 3.4 per cent higher.

For the full year, the company predicts sales of Y585bn, up from Y570bn last year, and a pre-tax profit of Y42bn, up from Y40bn.

Fujisankei puts \$50m into new US film maker

Fujisankei Communications Group, a Tokyo media and entertainment company, said it has invested \$50m to form a US film production company.

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INTERNATIONAL COMPANIES AND FINANCE

Swiss Bank lifts profit by 40% in sluggish economy

By William Dawkins in Geneva

SWISS BANK Corporation, Switzerland's second largest bank, said yesterday it had lifted its profit for the first nine months of 1990 by nearly 40 per cent, despite provisions and write-offs, but it gave no figures.

At the half-way stage SBC disclosed a 28 per cent increase to SFr1.65bn in the comparable earnings figure.

Group and parent bank cash flows for the full year should be well ahead of last year's results, SBC said. But it was already clear that provisioning needs would also be significantly higher than in 1990.

With the economy continuing to be sluggish, loan positions subject to increased risk had expanded.

last year group cash flow

fell by 18 per cent to SFr1.65bn while the parent bank's cash flow at SFr1.63bn was down by 0.9 per cent. The first nine months of 1990 were, however, badly affected by the outbreak of the Gulf crisis.

Net interest earnings for the first nine months this year had been 9.5 per cent higher than improved margins, especially outside Switzerland, and lucrative money market operations, SBC reported.

On a cumulative basis commission income had grown by 6.7 per cent compared with the first three quarters of 1990.

Improved revenues from portfolio management and from credit and fiduciary businesses had outweighed the drop in brokerage receipts by a wide margin.

Volkswagen results, Page 28

NCC gives warning after drop of 44%

Foreign exchange earnings had also shown a particularly encouraging advance.

Total assets expanded by 1.1 per cent to SFr172.5bn during the first nine months, although the depreciation of the dollar since the end of June had resulted in third-quarter growth of only 0.5 per cent.

On aggregate, SBC's customer deposits declined by 1.9 per cent during the third quarter. Interbank time deposits, which had been relatively low at the end of June, were up 12.8 per cent; non-bank time deposits fell by 6.1 per cent. With short-term interest rates staying high, there was a net outflow of 0.1 per cent from savings and deposit accounts.

On a cumulative basis commission income had grown by 6.7 per cent compared with the first three quarters of 1990.

Improved revenues from portfolio management and from credit and fiduciary businesses had outweighed the drop in brokerage receipts by a wide margin.

Volkswagen results, Page 28

Dassault plunges to FFr194m

By William Dawkins in Paris

DASSAULT Aviation, the French maker of military and business aircraft, reported a 28 per cent decline in group profits for the first half of the year and a sharp fall in new orders.

The group, headed by Mr George Dassault, saw a 29 per cent decline in consolidated sales from FFr8.8bn (\$1.35bn) in the first half of 1990 to FFr2.2bn. In the same period of this year, consolidated profits fell 11.8 per cent from FFr3.9m to FFr2.9m.

Group profits after minorities, fell more steeply from FFr3.9m to FFr1.9m. Exports

accounted for 60 per cent of sales.

New orders taken in the first half - of which 36 per cent came from civil and space industry customers - dropped to FFr3.9bn, from FFr6.5bn in the same period in 1990. However, the figure was not indicative of the likely volume of orders for the full year, said the group. It expected full-year turnover to reach FFr16bn, which would be well down on the FFr18.8bn reported last year.

Development of the Rafale, the new fighter aircraft due for delivery to the French military in 1996, was proceeding on target. Three prototypes were currently undergoing trials, said Mr Dassault.

The Falcon 50 and 900 business jets were showing good sales, after a slowdown at the start of the year due to the impact of the Gulf crisis.

Meanwhile, development of the new Falcon 2000 medium-sized business jet - due for service from 1994 - was on schedule. A prototype was under construction with co-operation from Alenia, the Italian aerospace group.

Delivery to the French military in 1996 was proceeding on target. Three prototypes were currently undergoing trials, said Mr Dassault.

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Granada names chief executive

By Jane Fuller in London

MR GERRY Robinson, who led Compass Group through what was briefly the UK's largest management buy-out, has been appointed chief executive of Granada Group, the British television, leisure and computer services concern.

Last week Granada retained its UK television franchise for £9m, in spite of being spectacularly outbid by North West Television, which fell at the quality hurdle.

On the same day, it cut 500

jobs as part of a radical reorganisation of its loss-making computer maintenance business. The poor performance was the main reason for the departure of the previous chief executive, Mr Derek Lewis.

His resignation in May was seen as a sacrifice required to clear the way for a rights issue, which came in July. It brought in £163m (\$223m). The proceeds, together with the £137m sale of bingo clubs, cut group debt from £634m to £340m.

Granada, which cut its interim dividend, had earnings per share last year not much above the 1986 figure.

Mr Robinson said his job would be to "look at the basics in terms of improving profitability". He said his experience at Compass would help him in dealing with Granada's motorway services, computer maintenance and TV rental operations.

Lex, Page 22
Observer, Page 20

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Lex, Page 22
Observer, Page 20



Proposed Privatisation of Heracles General Cement Company S.A.

As part of the Greek Government's privatisation programme, Industrial Reconstruction Organisation S.A. ("IRO"), a holding company controlled by the Greek state, is proposing to offer for sale cash a block of shares representing approximately 69.8% of the issued share capital (the "IRO Shareholding") of Heracles General Cement Company S.A. ("Heracles"). IRO has appointed Morgan Stanley International and National Investment Bank for Industrial Development S.A. as its joint financial advisors for this transaction.

Heracles is the largest producer and exporter of cement in Greece. Its shares have been listed on the Athens Stock Exchange since 1919.

Persons interested in participating in the offering programme who believe that they have the necessary financial and business capacity to consummate an acquisition of the IRO Shareholding expeditiously and to contribute to the development of the Heracles Group, are invited to express their interest in writing directly to Morgan Stanley International and National Investment Bank for Industrial Development at the following address by no later than 5 p.m. (London time) on 31 October, 1991.

Morgan Stanley International
Kingsley House
1A Wimpole Street
London W1M 7AA
England

For attention of:
Heracles Privatisation Team
Mergers & Acquisitions Department
Telephone: (44 71) 709 3900
Telefax: (44 71) 709 3912

Those parties who are invited to participate in the offering programme will be required to sign a Confidentiality Agreement before they are provided with information regarding Heracles, the IRO Shareholding and the offering procedures.

IRO reserves the right in its sole discretion to conduct such enquiries as it or its advisors may consider appropriate regarding the ability of any party to consummate the proposed transaction and to disallow any party from participating in the offering programme.

This advertisement has been approved by Morgan Stanley International, a member of the Securities and Futures Authority, for distribution in the United Kingdom. This advertisement does not constitute an offer for sale.

22 October, 1991

Mannesmann deal raises a groan

Christopher Parkes on the German group's acquisitions strategy

The investment community groaned again yesterday when Mannesmann, the German engineering group, bought Europe's largest clutch maker, Fichtel & Sachs. It groaned again yesterday when it announced an agreement to buy control of vehicle instruments and controls specialist VDO Adolf Schindling.

The complaints were the same on both occasions: Mannesmann had paid too much, and if it really wanted to escape the cyclical clutches of its basic steel tube business, what oo was it doing shovelling funds into the cyclical and crushingly competitive motor components business?

"It's a pity they can't find anything better to do with their money," one analyst remarked.

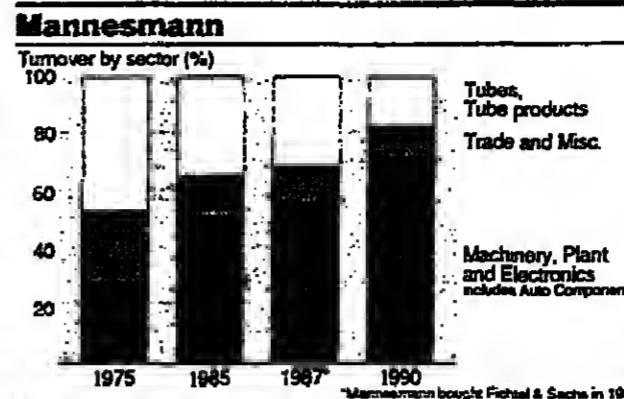
Mannesmann has not disclosed the price of the acquisitions.

But Siemens, which also bid, hinted yesterday when it said it regretted not having succeeded, adding that the controlling Schindling-Rheinberger family wanted too much.

Even so, Mannesmann's

money is still pouring into components. Last year while Fichtel & Sachs's orders and sales fell, it spent DM277m (\$161m) building up the division - 22 per cent of the group's total capital investment - compared with DM241m in 1990.

By 1990, the proportion was down to just 17 per cent, while plant and machinery, formerly 28 per cent of the business, grew to 47 per cent. Last year, before the acquisition of a controlling stake in Boge, with sales of DM750m, vehicle components were 13 per cent of turnover, matching electronics. VDO had sales of DM2.2bn in 1990, and this year reported



midway sales of DM1.1bn.

The development of Mannesmann's electronics interests, after a wobbly patch which concluded with the sale last year of the company's stake in Kienzle, the computer group, to Digital Equipment of the US underlines the strategic changes.

The main thrust of Mr Dieter's strategy, however wrong and costly it is considered to be outside the Düsseldorf headquarters, continues at speed. Mannesmann is becoming a technology-led company, characterised by the clear shift from the old steel and tube base, which in 1975 accounted for almost 50 per cent of sales.

By 1990, the proportion was down to just 17 per cent, while plant and machinery, formerly 28 per cent of the business, grew to 47 per cent. Last year, before the acquisition of a controlling stake in Boge, with sales of DM750m, vehicle components were 13 per cent of turnover, matching electronics. VDO had sales of DM2.2bn in 1990, and this year reported

Investor frustration holds secret of trust's success

THE SECRET of the success of M&G's new Income Investment Trust may lie in the frustration of private investors over the government's insistence on individual share ownership, writes Norma Cohen in London.

Currently, up to £5,000 per year can be put into a PEP, with all investments free from capital gains or income tax.

However, no more than £3,000 can be put into a collective investment and at least half must be invested in the UK.

Thus, those individuals chary of their ability to pick stocks wisely, or who are concerned about achieving sufficient diversification, have been

unable to take full advantage of a PEP's tax relief.

Mr David Boutell, of Chase de Vere, an independent financial advisor and producer of the monthly PEP Guide, said that most individuals find that managing a portfolio of eight to 10 stocks is awkward and expensive, but that fewer stocks expose the investor to greater risks. Thus, collective investment make more sense.

"We thought the M&G trust was a good idea and recommended it heavily to our clients," he said.

Despite intensive lobbying from the operators of collective

investment schemes, the government has held firm in its insistence that no more than half a PEP can be invested that way.

M&G's own fund allowed individuals to take advantage of a loophole in the current PEP legislation enabling them to put all their funds into a new equity offering. During the 42-day initial offering period of the Income Investment Trust, its shares are eligible.

However, once the offer closes, it will no longer be a suitable PEP investment beyond the £3,000 limit.

October 1991

This announcement appears as a matter of record only.

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FT GUIDE TO WORLD CURRENCIES

The table below gives the latest available rates of exchange (rounded) against four key currencies on Monday, October 21, 1991. In some cases the rate is nominal. Market rates are the average of buying and selling rates except where they are shown to be otherwise. In some cases market rates have been calculated from those of foreign currencies to which they are tied.

COUNTRY	£ STG	US \$	D-MARK	YEN	COUNTRY	£ STG	US \$	D-MARK	YEN	COUNTRY	£ STG	US \$	D-MARK	YEN
(X 100)	(X 100)	(X 100)	(X 100)	(X 100)	(X 100)	(X 100)	(X 100)	(X 100)	(X 100)	(X 100)	(X 100)	(X 100)	(X 100)	
Afghanistan (Afghan)	99.29	57.737	34.1652	44.1601	Ghana (Cedi)	649.782	378	223.077	289.111	Pakistan (Pak. Rupee)	42.19	24.5433	14.5222	18.7715
Albania (Leke)	10.1370	5.697	3.4895	4.5103	Gibraltar (Gib. £)	1.00	0.674	0.490	0.510	Paraguay (Guarani)	1.2121	0.9433	0.5582	0.7215
Algeria (Dinar)	38.7730	22.5595	1.3469	17.2526	Greenland (Danish Krona)	11.2250	6.5299	3.864	4.994	Peru (New Sol)	225.65	132.19	776.472	1003.63
Aldorra (Fr. Fr.)	9.9150	5.7678	3.4113	4.4115	Guadeloupe (Euro)	4.6560	2.7083	1.6027	2.0716	Philippines (Peso)	1.5565	0.9028	0.5583	0.6762
Angola (Escudo)	15.5000	9.3745	6.3325	6.3325	Guatemala (Quetzal)	1.7150	1.7578	0.9517	0.7446	Pitcairn (G. P. P. I. P.)	1.00	0.5617	0.3442	0.4469
Angola (Kwanza)	177.50	103.432	61.2048	79.1101	Guyana (Guyana \$)	140.80	814.92	482.203	623.27	Poland (Zlote)	3.0558	1.766	1.045	1.5007
Anguilla (E. Car. \$)	4.6565	2.7068	2.027	2.0716	Haiti (Gourde)	8.4225	5	2.9481	3.8344	Portugal (Esc. P.)	19220.00	118.00	6616.18	8851.75
Argentina (Austral)	170.8735	94.025	58.002	76.0002	Honduras (Lempira)	10.3225	108.031	111.265	143.616	Portugal (Esc. P.)	10.5000	6.5000	4.0000	5.0000
Argentina (Peso)	2.1540	1.2545	0.7435	0.961	Iceland (Icelandic Krona)	11.2250	6.5299	3.864	4.994	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Australia (Aus \$)	20.395	11.8444	7.0206	9.0745	Indonesia (Rupiah)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Austria (Schilling)	20.50	11.4543	6.6565	11.2253	Iran (Rial)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Azores (Pataca)	250.00	145.453	86.0585	111.2253	Iraq (Dinar)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Bahamas (Dollar)	17.129	1.0	0.5917	0.7548	Ireland (Pound)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Bahrain (Dinar)	12.15	7.0206	4.5103	5.0000	Israel (Sheqel)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Bangladesh (Taka)	62.85	36.5619	21.6351	27.9644	Italy (Lira)	103.65	60.2996	25.6797	35.6798	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Barbados (Dollar)	3.70	2.4767	1.6276	2.027	Japan (Yen)	44.41	25.8397	15.2874	19.7597	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Bolivia (Pataca)	3.490	2.4767	1.6276	2.027	Latvia (Lats)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Bolivia (Real)	102.21	20.5945	35.5152	45.4742	Lithuania (Litas)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Bolivia (Sol)	2.7153	1.84918	1.1206	1.3725	Malta (Liri)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Burkina Faso (CFA Fr.)	495.75	288.394	170.654	220.578	Mauritania (Ouguiya)	0.5926	0.3043	0.2043	0.2641	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Burma (Kyat)	24.50	1.20516	20.5116	15.5006	Mauritius (Rupee)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Burundi (Franc)	54.50	26.5116	20.5116	20.5116	Mexico (Peso)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Cambodia (Riel)	1379.45	802.56	484.05	615.838	Moldova (Leu)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Cameron (CFA Fr.)	1.9585	1.1276	0.6722	0.8625	Mongolia (Togrog)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Canada (Canadian \$)	1.9585	1.1276	0.6722	0.8625	Morocco (Dirham)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Caribbean (US Dollar)	1.9415	1.12491	44.1155	57.0189	Mozambique (Metical)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Ceylon (Rupiya)	1.4315	0.8492	0.4927	0.6369	Myanmar (Kyat)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Chad (CFA Fr.)	495.75	288.394	170.654	220.578	Niger (Nigerian Naira)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Chile (Peso)	495.75	288.394	170.654	220.578	Nigeria (Nigerian Naira)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
China (Renminbi)	61.05	36.1626	21.312	27.5578	North Korea (Won)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Colombia (Peso)	112.50	65.5277	38.0577	51.7422	Norway (Krone)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Costa Rica (Colón)	1.7150	1.12491	0.6722	0.8625	Oman (Rial)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Côte d'Ivoire (CFA Fr.)	495.75	288.394	170.654	220.578	Oman (Rial)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Denmark (Danish Krone)	11.2250	6.5299	3.864	4.9944	Oman (Rial)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Djibouti (Fr. Fr.)	1.7150	1.12491	0.6722	0.8625	Oman (Rial)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Dominican Rep. (Peso)	4.4500	2.4767	1.6276	2.027	Oman (Rial)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Dominican Rep. (US Dollar)	4.4500	2.4767	1.6276	2.027	Oman (Rial)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Ecuador (Peso)	22.16	12.9512	7.0716	9.8598	Oman (Rial)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Ecuador (US Dollar)	1928.11	1121.65	663.721	857.891	Oman (Rial)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
Egypt (Egyptian £)	10.70	6.166	3.864	4.9944	Oman (Rial)	1.7150	1.7578	0.9517	0.7446	Portugal (Esc. P.)	11.2250	6.5299	3.864	4.994
El Salvador (Colón)	14.0750	8.1266	4.8201	5.2358	Oman (Rial)	1.7								

UK COMPANY NEWS

Second legal action taken in US to repel generic drug makers Glaxo faces new attack on patents

By Paul Abrahams and Bernard Simon

GLAXO, Britain's biggest pharmaceutical company, yesterday fired a second salvo in the defence of its patents for Zantac, the ulcer treatment which is the world's best selling drug.

The company has started legal action in the US against Novopharm, one of Canada's largest generic drug manufacturers. This follows Glaxo's decision last April to fight Genpharm, a much smaller Canadian manufacturer, which like Novopharm has also filed an abbreviated new drug application to produce a generic version of Zantac. In both cases, Glaxo claims the companies will infringe one of the two patents protecting Zantac.

The implications for Glaxo if it loses the patent battle are potentially serious. Generic drugs have in the past taken as much as 50 per cent of the market of a previously patented drug within two years.

With sales of £16bn a year, Zantac represented 47 per cent of Glaxo's sales in the year to June 1991, and probably more of its profits. About half of Zantac's sales are in the US. Glaxo's dependency on Zantac is, however, declining as other products come on stream. Its share price fell 15p to £14.23.

Zantac is protected by two patents, one known as Form 1 which expires in the US in 1995, and a second, called Form 2, which covers the crystalline

form of ranitidine hydrochloride in which Zantac is marketed. It is the validity of the Form 2 patent, which expires in the US in 2002, that the two companies are challenging.

Echoing the arguments of other generic manufacturers which are challenging Zantac, Mr Leslie Dan, owner and chief executive of Novopharm said yesterday that he "had reason to believe" that Form 2 is invalid. The main challenge to Form 2 is that it does not differ significantly from Form 1.

Glaxo said it believed it had valid patent property in the US extending at least to 2002. It said it had not been surprised by additional generic drug manufacturers attacking its

patent and would not be surprised if other companies followed Novopharm's lead.

Analysts are divided over the strength of the Form 2 patent. Ms Lisa Arnold, an analyst at County NatWest, argued that Zantac is safe until the end of the century. However, Mr Robin Gilbert, a pharmaceutical analyst at James Capel, said few people in the industry believe Glaxo stands a chance when it tries to defend the patent.

"The question is not whether Glaxo has an excellent future," said Mr Gilbert. "The company has plenty of good products in the pipeline. The question is whether Glaxo's future is spectacular."

Amber Day beats recession with £10.1m

WITH EVERYONE wanting a bargain in the recession-hit UK, the Amber Day retail group more than trebled its profit last year thanks to its What Everyone Wants discount chain, writes Jane Fuller.

The taxable figure rose from £3.02m to £10.1m in the 53 weeks to August 3, on turnover of £102.2m (£31.2m). It had been predicted with the £24.4m rights issue in June - the second cash call in little more than a year - that profit would reach £9.75m.

What Everyone Wants was the driving force behind the growth. Its 44 shops in Scotland and the north of England contributed £13.1m operating profit.

The menswear chains, Woodhouse and Review, lost money as they succumbed to the sector's weakness in the south of

England. The combined operating loss of £204,000 compared with a profit of £1.7m.

Mr Philip Green, chairman and chief executive, was candid about the focusing of effort on WEW, rather than on the menswear stores acquired in 1988-89, his first

year as head of the group.

WEW's operating profit margin was 16 per cent on turnover of £81m. He said margins had been enhanced by the computerised gathering of sales information, the tight control of stock and the low cost basis of its sites. The discount chain's products include clothes, household goods, toys and perfume.

With the rights issue proceeds coming in just before the year-end, net debt was cut from £23m in July 1990 to virtually nothing. The issue restored the group to

net worth of £22m.

Mr Green anticipated that the debt position would be similar at the end of this year, after the opening of a dozen more WEW stores and some refurbishment, giving a total capital spending budget of £3m to £4m (£3.2m). He stressed that no further acquisitions or share issues were planned.

The average number of shares went up from 51.6m to 91.7m last year. As a result, earnings per share grew less rapidly than profits to 7.65p (4.28p).

The June 1-for-3 issue will have a further impact on share numbers this year.

Import and distribution increased its profit to £1.2m (£447,000). Interest costs rose to £2.25m (£150,000 received).

A final dividend of 1.8p makes a total of 2.7p (2p).

Advertising fall leaves Southern News at £8.6m

SOUTHERN Newspapers, the regional publisher which has received a number of bid approaches, yesterday revealed that pre-tax profits slumped from £15.05m to £8.6m over the year to end-June as the recession in the south of England hit advertising revenues, writes Clare Pearson.

Profits from newspaper printing and publishing dropped to just £3.31m (£7.91m) as turnover fell from £77.1m to £71.4m.

A surplus on disposal of investments, including shares in Reuters, the news agency and information group, and Associated British Ports, accounted for £5.9m (25.5m) of

profits.

However, Mr John Salkend, who joined the board in March and this month became chairman, indicated in his annual statement that the outlook for the current year was brighter. Revenues appeared to have stabilised, he said.

He added that the company had the "management and financial strength to continue trading successfully as an independent group." The final dividend is maintained at 7.5p for an unchanged yearly total of 10.5p.

Mr Salkend said yesterday that the group's financial position was strong; its bank overdraft, net of cash, amounted to

only £578,000, and it was less than 15 per cent geared.

The Monopolies and Mergers Commission is due to report by

Thursday on the bid approaches - which include those from Pearson, which publishes the Financial Times, and Reed International, the publishing group - to Mr Peter Lilley, the trade and industry secretary.

• COMMENT

On the basis of the last quotes for shares in Southern, which change hands under the Stock Exchange's matched bargain rules, the group is capitalised at about £70m and the stock is trading on a multiple of about

30 times last year's earnings from newspaper publishing and printing. Evidently, the valuation owes a great deal to the expectation of bids emerging.

The referrals of the five in July were made on the basis of the concentration of paid-for circulation to which the mergers would give rise, but the City is not expecting the MMC to block them. Any defence may be expected to make much of Southern's recent board appointments and a group reorganisation being carried out. The shareholder list includes M & G Investment Management and Portsmouth and Sunderland Newspapers, with about 5 per cent apiece.

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10th-15th November 1991

EUROPEAN INVESTMENT BANK

8.00% ECU Bonds of 1998, due

19th October 1998

Present to the terms and conditions of the Bonds, notice is hereby given to the holders that during the twelve-month period ending 19th October 1991, ECU

1254,000 of the European Investment Bank's 8% Bonds of 1998, due 19th October, 1998 have been purchased.

As of 19th October 1991 the principal amount of such Bonds remaining in circulation was

ECU 84,746,000

Luxembourg, 19th October 1991

EUROPEAN INVESTMENT BANK

Notice is hereby given that the notes will bear interest at 10.025% per annum from 22 October 1991

to 22 January 1992. Interest payable on 22 January 1992 will amount to ECU236.19 per

ECU10,000 and ECU2,561.94 per

ECU100,000 note.

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P&P shares plunge after profits warning

By Alan Cane

SHARES IN P&P, one of the UK's largest distributors of personal computers, halved in value yesterday after the company warned it was unlikely to make a profit in the second half of the year. As a consequence its full year figures would be well below market expectations.

The City reacted with surprise to the announcement and knocked the shares down from 101p to 50p.

The market had been predicting pre-tax profits of £6m-£8m for the full year, after the company made £3.3m on sales of £120m in the first half. Now it seems unlikely that P&P, which has been pre-tax profits of £1.5m in the second half of 1990, will end up with a profit of £1.5m.

Traditionally, the second half is P&P's strongest sales period. This year sales did not materialise as customers struggled with the recession freeze expenditure on personal computers and other capital items.

Analysts said they would have appreciated earlier warning of the problem. Their sense of shock was deepened by the fact that the company had appeared to perform well in the first half, despite chaotic conditions in the PC market.

Margins were being cut through a combination of fierce price competition and the falling cost of computer hardware which had devastated some PC distributors.

P&P had been restructuring with the intention of improving the quality of earnings through a greater emphasis on competing services, which commanded substantially greater gross margins than PC sales.

The restructuring measures had been brought forward by 12 months and yesterday's warning indicated that P&P is still very dependent on volume sales of PCs. The company announced a further 60 redundancies.

It claimed the balance sheet was still strong and that it would recommend an unchanged final dividend.

That would do little to comfort Scottish Amicable Investment Managers, which bought 5m P&P shares just before the price crashed.

Tough going for Aberdeen Steak

After providing £3.2m for estimated losses on disposal of closed branches, Aberdeen Steak Houses finished 1990 with a pre-tax loss of £3.27m. The comparative profit was £1.66m.

It claimed the balance sheet was still strong and that it would recommend an unchanged final dividend.

It compares with a £2.27m deficit in the second half of last year and with a profit of £5.00m for the first half.

The Interim dividend is passed (1p) but that decision should not be taken as indication of the final, directors stated. Losses per share were £1.66 (earnings 6.77p).

Interest charges were £2.44m (£1.25m). No interest was capitalised this time (£350,000).

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UK COMPANY NEWS

Waterford Foods pays £37.5m for dairy expansion

By Tim Coone in Dublin

WATERFORD FOODS, the Irish dairy and foods group, yesterday took a further step in its expansion strategy into Europe by acquiring Manchester-based United Co-operative Dairy for £37.5m.

Following its acquisition of Heublein Foods in 1988, Waterford will now control the second largest dairy business in the north-west of England, in a market of 7m people, twice the size of its domestic market.

Mr Stephen O'Connor, managing director, said the group's aim was "to eventually have a major business in Europe". He said the limited market in Ireland necessitated overseas expansion if the company was to survive in the face of competition in an open European market.

He said reforms of the EC's Common Agricultural Policy would oblige dairy-based food

groups to move away from the production of butter and skimmed milk products which depend upon intervention buying and into new product areas. The acquisition fits in with this strategy, he said.

"Our next logical move would be into mainland Europe during the next couple of years."

The acquisition, financed by bank debt and from current income, will expand turnover by some 20 per cent, and for the first time place the UK arm of Waterford's business above that of its home-based Irish operations. The purchase is phased over three years.

Last month, the group abandoned merger talks with Avonmore Foods, another leading Irish dairy foods group, the two having failed to reach agreement on the balance of power within a new merged company.

Mr Trevor West, finance director, said that the proceeds would be used to reduce group debt. The company in June had expected that net debt would reach £55m at the end of September, accounting for about 55 per cent of shareholders' funds.

However, the UK housing market has not sustained the level of improvement the company had hoped for when it made the forecast.

The sale of Lovell Scotland is part of an overall rationalisation of housing operations which have been consolidated from four into two operating units based in the Midlands and the south of England.

Dean & Bowes sells Pannell offshoot

Dean & Bowes, the interior refurbishment group, is selling its Pannell Signs subsidiary to reduce debt by £1.1m and cut gearing by a quarter to 60 per cent.

Pannell has been hit by the recession and did not contribute to the £735,000 half-year operating profit reported on October 17.

The consideration is £38,000, with the purchaser taking for £20,000 debt and a £1.07m overdraft.

Mr Jessup's responsibilities as chief executive will pass to Mr Ronald Joseph, finance director, who has been appointed managing director. Mr Jessup will retain his post as chairman. "It was a boardroom decision and I go along with it," he said.

Mr John Ganney, company secretary, will become finance director.

In the six months to February 28, Jessup suffered a pre-tax loss of £189,000, compared with a profit of £975,000 in the previous year.

The full-year results are due on November 13.

Value & Income Trust

Over the six months to September 30 net asset value of the Value & Income Trust improved by 4p to 81p per share. A year earlier it stood at 76.2p.

The year's dividend is forecast to rise from 2.7p to 3.24p, with the interim now lifted to 1.62p (1.35p).

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COMMODITIES AND AGRICULTURE

China to join tin producers' association

By Kenneth Gooding, Mining Correspondent

CHINA, THE world's second-largest tin producer, is joining the Association of Tin Producing Countries, the association that is attempting to stabilise the market by setting export quotas to compensate for the huge stocks that have been hanging over the market since the 1985 collapse of the International Tin Council's price support scheme.

Analysts suggested yesterday that China's move might have a short-term favourable impact on tin market sentiment and should in the longer term give the association more control over supplies when prices started to rise again.

However, the London Metal Exchange price of tin for immediate delivery last night closed \$12.50 down on Friday's level at \$5,565 a tonne.

Depressed by overhanging stocks, tin prices have been exceptionally low and this has forced Malaysia and Thailand to cut output by nearly one-third and caused widespread mine and smelter closures throughout the rest of the world.

China will join Australia, Bolivia, Indonesia, Malaysia, Nigeria, Thailand and Zaire in the ATPC which is working to cut stockpiles, at present about 45,000 tonnes, to below 20,000 tonnes.

The ATPC set members an export limit of 95,849 tonnes for 1991. It is considering a proposal that quotas should be cut

by 9 per cent in 1992. The association suggests that China exported 15,884 tonnes of tin in concentrates last year, up from 10,000 tonnes in 1989.

Mr Ginanjar Kartasasmita, Indonesia's mines and energy minister, said at the association's meeting in Canberra yesterday that this target should be reached in two years.

Mr Fidelis Madavo, analyst at the Commodities Research Unit, said China's move was "a vote of confidence in the ATPC". He pointed out, however, that the tin market's main concern was Brazil, now the world's biggest producer, and Brazil had still to be persuaded to join the producers' association.

According to Professor Tony Giles of Reading University, one of the survey's principal authors, out of the UK's 240,000 holdings, at least 100,000 fall into the very small farm category, averaging no more than 1.1 hectares (27 acres).

What's more: "In England in 1988 the average net farm income on these holdings was a mere £300, falling to £200 in 1989". Yet "off-farm" income averaged £1,250 in 1988, rising to £1,500 in 1989", the study's last report says.

The tin market was also suffering from the total collapse of exports to the former Soviet Union which used to take 15,000 to 16,000 tonnes of tin a year from western producers.

Mr Shaw said that, despite the Soviet problems, it was likely that "by the end of 1992 the tin market's stock overhang might show clear signs of having disappeared and, in the absence of a rapid response from producers, prices could yet test \$5 a lb (£11,020 a tonne) in the later stages of that year."

Squabbles delay Soviet oil and gas development

By John Lloyd in Moscow

SQUABBLING between officials at local and state level is delaying the award of the contract to exploit the rich oil and gas reserves off Sakhalin, in the Soviet Far East. Leading contenders for the contract, worth over \$5bn, said yesterday that they expected no final say on granting the concession.

The Sakhalin field, the exploration of which had been entrusted to a Japanese consortium – including Sodeco – in the 1970s before being stopped after disagreements, is estimated to have a capacity of between 5m and 7m tonnes of oil a year over a 25-year productive life, and 15m-20bn cubic metres of natural gas.

• The price of the Organisation of Petroleum Exporting Countries' basket of seven crude last week moved closer to the \$21-a-barrel reference price, averaging \$20.76, up from \$20.30 the previous week.

The failure to agree so far stems from the chaotic situa-

tion in the industry's governing bodies as the old Soviet Ministry of Oil and Gas is dismembered and largely reformed into Russian-level structures. At the same time, a committee in Sakhalin is claiming the right to have the final say on granting the concession.

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Compiled from Reuters

MARKET REPORT

THE GOLD price rose sharply at the London bullion market yesterday in a follow-through from Friday night's continued rally in New York. By the close it was quoted at \$164.40 a troy ounce, up \$4.40. Gold was underpinned by comments by former Soviet Prime Minister Nikolai Ryzhkov at the weekend that seemed to endorse recent statements by Soviet economist Grigory Yavlinsky that Moscow holds only 240 tonnes in gold reserves. But traders said trading was fairly thin and suggested that stiff resistance at \$165 an ounce would have to be broken before further significant progress could be made. There were worries,

London Markets

SPOT MARKETS + or -

Crude oil (per barrel POD) +0.025

Brent Blend (dated) \$22.40+0.02

Brent Blend (Dec) \$22.50+0.02

W.T.I. (11 pm est) \$23.75+0.02

Oil products + or -

(NME prompt delivery per tonne CIF) + or -

Premium Gasoline \$228+0.00

Gas Oil \$225+0.00

Heavy Fuel Oil \$85+0.00

Naphtha \$220+0.00

Petroleum Asphalt Estimates

+ or -

Gold (per troy oz) \$364.40

Silver (per troy oz) \$14.00

Platinum (per troy oz) \$371.00

Palladium (per troy oz) \$98.35

Copper (US Producer) 110.25

Lead (US Producer) 39.10

Tin (Kuala Lumpur market) 14.50

25.00

Zinc (US Prime Western) 62.00

Cattle (live weight) 104.18p

Sheep (dead weight) 112.45p

Pigs (live weight) 74.05p

London daily sugar (raw) \$256.80

-1.5

London daily sugar (white) \$267.00

-3.0

Tote and Lyte export price £248.50

-1.0

Berley (English feed) £117.00

Maize (US 3 yellow) £140.00

Wheat (US Dark Northern) £101.00

Rubber (Nov) 54.25p

Rubber (Dec) 53.75p

Rubber (Nov) RRS No 1 Nov 22.5m

Coconut oil (Philippines) \$260.50

Palm Oil (Malaysia) \$342.50

Copra (Philippines) \$365.00

Soybeans (US) £151.5

Cotton ('A' Ind) 67.55p

Wool tops (Gte Super) 387p

+0.00

E a tonne unless otherwise stated. P=per cent. B=cent/bbl. R=Ringgit/kg. Q=New Jan 1 Sep/Dec 2 Sep/Dec 3 Sep/Dec 4 Sep/Dec 5 Sep/Dec 6 Sep/Dec 7 Sep/Dec 8 Sep/Dec 9 Sep/Dec 10 Sep/Dec 11 Sep/Dec 12 Sep/Dec 13 Sep/Dec 14 Sep/Dec 15 Sep/Dec 16 Sep/Dec 17 Sep/Dec 18 Sep/Dec 19 Sep/Dec 20 Sep/Dec 21 Sep/Dec 22 Sep/Dec 23 Sep/Dec 24 Sep/Dec 25 Sep/Dec 26 Sep/Dec 27 Sep/Dec 28 Sep/Dec 29 Sep/Dec 30 Sep/Dec 31 Sep/Dec 1 Oct/Dec 2 Oct/Dec 3 Oct/Dec 4 Oct/Dec 5 Oct/Dec 6 Oct/Dec 7 Oct/Dec 8 Oct/Dec 9 Oct/Dec 10 Oct/Dec 11 Oct/Dec 12 Oct/Dec 13 Oct/Dec 14 Oct/Dec 15 Oct/Dec 16 Oct/Dec 17 Oct/Dec 18 Oct/Dec 19 Oct/Dec 20 Oct/Dec 21 Oct/Dec 22 Oct/Dec 23 Oct/Dec 24 Oct/Dec 25 Oct/Dec 26 Oct/Dec 27 Oct/Dec 28 Oct/Dec 29 Oct/Dec 30 Oct/Dec 31 Oct/Dec 1 Nov/Dec 2 Nov/Dec 3 Nov/Dec 4 Nov/Dec 5 Nov/Dec 6 Nov/Dec 7 Nov/Dec 8 Nov/Dec 9 Nov/Dec 10 Nov/Dec 11 Nov/Dec 12 Nov/Dec 13 Nov/Dec 14 Nov/Dec 15 Nov/Dec 16 Nov/Dec 17 Nov/Dec 18 Nov/Dec 19 Nov/Dec 20 Nov/Dec 21 Nov/Dec 22 Nov/Dec 23 Nov/Dec 24 Nov/Dec 25 Nov/Dec 26 Nov/Dec 27 Nov/Dec 28 Nov/Dec 29 Nov/Dec 30 Nov/Dec 31 Nov/Dec 1 Dec/Jan 2 Dec/Jan 3 Dec/Jan 4 Dec/Jan 5 Dec/Jan 6 Dec/Jan 7 Dec/Jan 8 Dec/Jan 9 Dec/Jan 10 Dec/Jan 11 Dec/Jan 12 Dec/Jan 13 Dec/Jan 14 Dec/Jan 15 Dec/Jan 16 Dec/Jan 17 Dec/Jan 18 Dec/Jan 19 Dec/Jan 20 Dec/Jan 21 Dec/Jan 22 Dec/Jan 23 Dec/Jan 24 Dec/Jan 25 Dec/Jan 26 Dec/Jan 27 Dec/Jan 28 Dec/Jan 29 Dec/Jan 30 Dec/Jan 31 Dec/Jan 1 Jan/Feb 2 Jan/Feb 3 Jan/Feb 4 Jan/Feb 5 Jan/Feb 6 Jan/Feb 7 Jan/Feb 8 Jan/Feb 9 Jan/Feb 10 Jan/Feb 11 Jan/Feb 12 Jan/Feb 13 Jan/Feb 14 Jan/Feb 15 Jan/Feb 16 Jan/Feb 17 Jan/Feb 18 Jan/Feb 19 Jan/Feb 20 Jan/Feb 21 Jan/Feb 22 Jan/Feb 23 Jan/Feb 24 Jan/Feb 25 Jan/Feb 26 Jan/Feb 27 Jan/Feb 28 Jan/Feb 29 Jan/Feb 30 Jan/Feb 31 Jan/Feb 1 Feb/Mar 2 Feb/Mar 3 Feb/Mar 4 Feb/Mar 5 Feb/Mar 6 Feb/Mar 7 Feb/Mar 8 Feb/Mar 9 Feb/Mar 10 Feb/Mar 11 Feb/Mar 12 Feb/Mar 13 Feb/Mar 14 Feb/Mar 15 Feb/Mar 16 Feb/Mar 17 Feb/Mar 18 Feb/Mar 19 Feb/Mar 20 Feb/Mar 21 Feb/Mar 22 Feb/Mar 23 Feb/Mar 24 Feb/Mar 25 Feb/Mar 26 Feb/Mar 27 Feb/Mar 28 Feb/Mar 29 Feb/Mar 30 Feb/Mar 31 Feb/Mar 1 Mar/Apr 2 Mar/Apr 3 Mar/Apr 4 Mar/Apr 5 Mar/Apr 6 Mar/Apr 7 Mar/Apr 8 Mar/Apr 9 Mar/Apr 10 Mar/Apr 11 Mar/Apr 12 Mar/Apr 13 Mar/Apr 14 Mar/Apr 15 Mar/Apr 16 Mar/Apr 17 Mar/Apr 18 Mar/Apr 19 Mar/Apr 20 Mar/Apr 21 Mar/Apr 22 Mar/Apr 23 Mar/Apr 24 Mar/Apr 25 Mar/Apr 26 Mar/Apr 27 Mar/Apr 28 Mar/Apr 29 Mar/Apr 30 Mar/Apr 31 Mar/Apr 1 Apr/May 2 Apr/May 3 Apr/May 4 Apr/May 5 Apr/May 6 Apr/May 7 Apr/May 8 Apr/May 9 Apr/May 10 Apr/May 11 Apr/May 12 Apr/May 13 Apr/May 14 Apr/May 15 Apr/May 16 Apr/May 17 Apr/May 18 Apr/May 19 Apr/May 20 Apr/May 21 Apr/May 22 Apr/May 23 Apr/May 24 Apr/May 25 Apr/May 26 Apr/May 27 Apr/May 28 Apr/May 29 Apr/May 30 Apr/May 31 Apr/May 1 May/Jun 2 May/Jun 3 May/Jun 4 May/Jun 5 May/Jun 6 May/Jun 7 May/Jun 8 May/Jun 9 May/Jun 10 May/Jun 11 May/Jun 12 May/Jun 13 May/Jun 14 May/Jun 15 May/Jun 16 May/Jun 17 May/Jun 18 May/Jun 19 May/Jun 20 May/Jun 21 May/Jun 22 May/Jun 23 May/Jun 24 May/Jun 25 May/Jun 26 May/Jun 27 May/Jun 28 May/Jun 29 May/Jun 30 May/Jun 31 May/Jun 1 Jun/Jul 2 Jun/Jul 3 Jun/Jul 4 Jun/Jul 5 Jun/Jul 6 Jun/Jul 7 Jun/Jul 8 Jun/Jul 9 Jun/Jul 10 Jun/Jul 11 Jun/Jul 12 Jun/Jul 13 Jun/Jul 14 Jun/Jul 15 Jun/Jul 16 Jun/Jul 17 Jun/Jul 18 Jun/Jul 19 Jun/Jul 20 Jun/Jul 21 Jun/Jul 22 Jun/Jul 23 Jun/Jul 24 Jun/Jul 25 Jun/Jul 26 Jun/Jul 27 Jun/Jul 28 Jun/Jul 29 Jun/Jul 30 Jun/Jul 31 Jun/Jul 1 Jul/Aug 2 Jul/Aug 3 Jul/Aug 4 Jul/Aug 5 Jul/Aug 6 Jul/Aug 7 Jul/Aug 8 Jul/Aug 9 Jul/Aug 10 Jul/Aug 11 Jul/Aug 12 Jul/Aug 13 Jul/Aug 14 Jul/Aug 15 Jul/Aug 16 Jul/Aug 17 Jul/Aug 18 Jul/Aug 19 Jul/Aug 20 Jul/Aug 21 Jul/Aug 22 Jul/Aug 23 Jul/Aug 24 Jul/Aug 25 Jul/Aug 26 Jul/Aug 27 Jul/Aug 28 Jul/Aug 29 Jul/Aug 30 Jul/Aug 31 Jul/Aug 1 Aug/Sep 2 Aug/Sep 3 Aug/Sep 4 Aug/Sep 5 Aug/Sep 6 Aug/Sep 7 Aug/Sep 8 Aug/Sep 9 Aug/Sep 10 Aug/Sep 11 Aug/Sep 12 Aug/Sep 13 Aug/Sep 14 Aug/Sep 15 Aug/Sep 16 Aug/Sep 17 Aug/Sep 18 Aug/Sep 19 Aug/Sep 20 Aug/Sep 21 Aug/Sep 22 Aug/Sep 23 Aug/Sep 24 Aug/Sep 25 Aug/Sep 26 Aug/Sep 27 Aug/Sep 28 Aug/Sep 29 Aug/Sep 30 Aug/Sep 31 Aug/Sep 1 Sep/Oct 2 Sep/Oct 3 Sep/Oct 4 Sep/Oct 5 Sep/Oct 6 Sep/Oct 7 Sep/Oct 8 Sep/Oct 9 Sep/Oct 10 Sep/Oct 11 Sep/Oct 12 Sep/Oct 13 Sep/Oct 14 Sep/Oct 15 Sep/Oct 16 Sep/Oct 17 Sep/Oct 18 Sep/Oct 19 Sep/Oct 20 Sep/Oct 21 Sep/Oct 22 Sep/Oct 23 Sep/Oct 24 Sep/Oct 25 Sep/Oct 26 Sep/Oct 27 Sep/Oct 28 Sep/Oct 29 Sep/Oct 30 Sep/Oct 31 Sep/Oct 1 Oct/Nov 2 Oct/Nov 3 Oct/Nov 4 Oct/Nov 5 Oct/Nov 6 Oct/Nov 7 Oct/Nov 8 Oct/Nov 9 Oct/Nov 10 Oct/Nov 11 Oct/Nov 12 Oct/Nov 13 Oct/Nov 14 Oct/Nov 15 Oct/Nov 16 Oct/Nov 17 Oct/Nov 18 Oct/Nov 19 Oct/Nov 20 Oct/Nov 21 Oct/Nov 22 Oct/Nov 23

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TO US THEY'RE THE SAME SIZE.

What might at first seem rather alarming evidence of defective vision is in fact a guiding principle at 3i. Over the years in which we have grown to be one of the world's leading providers of investment capital we have always tried to see the potential for growth in every business with which we have dealings.

Whatever the size of your company, our philosophy as successful investors in industry remains the same. We are looking for people with drive and ambition and a will to succeed. But at 3i we know that the best way to ensure consistent success is to produce individually tailored solutions to different problems. And as our success is ultimately based on yours, it is in our interest to do our best to help your business grow. This also means we are very happy to give long-term commitment.

And that long-term view is another reason why we think the fish are the same size. In time your minnow could become a big fish and at every stage in this development 3i can provide the capital you need.

As long-term investors in industry, 3i has the experience that can help your business grow. If you don't fancy getting swallowed up why not get in touch with your local 3i office.

FINANCIAL TIMES SURVEY

PRIVATE BANKING

Tuesday October 22 1991

The sector grew rapidly in the 1980s as lower taxation helped to create more high net worth

Individuals, write David Barchard and Norma Cohen. What impact has the recession had on the net worth of individuals? Have private bankers adapted their strategies?

Go-go days have gone

THE RECESSION of the 1980s has been a sobering experience for the world's wealthy and the bankers who look after their fortunes. For from the go-go years of the previous decade, which saw an explosion of private wealth, the rich of the 1980s feel they will do well to hang on to what they have.

For these individuals, conservative management has replaced wealth creation as the lynchpin of their private banking needs.

Private banking is the provision of investment banking services for wealthy individuals. While the services offered are no different from those offered elsewhere within commercial banks, it is the packaging and promotion that sets private banking apart.

Thus while the wealthy will still need to have their resources managed, the pace of growth in private banking is unlikely to continue as it has over the past few years.

"Last year private banking was very fashionable. Banks were attracted by a business which was growing at between 10 and 15 per cent a year. This was fuelled and resistant to economic downturn. This year we are beginning to see a retrenchment. Some players are being forced to turn back to business areas which have less long term potential but offer a more immediate and visible return," says Mr Alan Hogg, Head of International Private Banking at Barclays.

In the UK, most - though by no means all - admit they have been hearing cries of distress from some customers as a result of the recession, and other impacts such as growing losses at Lloyd's of London.

"So far we have not seen much real pain at Lloyd's even though more than 8 per cent of its 'names' bank with us," says Sir David Money-Coutts, chairman of Coutts, but UK private bankers recognise that the worst news from Lloyd's is probably still to come.

Aside from the effects of recession, private banking services are being reshaped by a more sophisticated customer base and the increasingly global nature of their investments.

Thus, the cost is rising

and its ensuing effect on the portfolios of the wealthy, institutions of all sorts are still lining up to get into the business. Mr Ian Woodhouse, private banking consultant with Price Waterhouse, said: "Banks, fund management groups and other financial institutions with global capacity, related products, expertise and significant distribution networks are lining up to buy traditional private banks that cannot fund the heavy investment and new

Smaller players may find the going tough as the 1980s advance. "Private banking calls for increasingly large investments in systems, especially for a global business. It eats up a awful lot of capital. I think the smaller stand-alone banks will find it hard to keep up," says one private banker in a large international group.

Meanwhile, merchant and investment banks are pushing their way into the private banking sector. In the US, Merrill Lynch and Goldman Sachs have bolstered their trust operations which form the base of private client services. While they are hampered in the US by the inability to make loans of their own, some investment banks have found other arrangements to extend credit services.

And while they have not yet become a formidable force, analysts view the investment trust and mutual fund managers as the next potential source of competition.

The growth of genuinely international private banking has been spurred by the disappearance of exchange controls worldwide. The volatility of the US dollar in the 1980s, for example, has encouraged many rich Americans to manage their currency risk by seeking private banking services in London or Switzerland," says one London private banker.

Perhaps this accounts for the surprising fact that some banks report a steady stream of Latin American private client business into London. Until now customers of this kind have generally preferred to stick to the western hemisphere, Miami or New York, and US dollar accounts.

Private banking has also

benefited from the general revolution under way in the banking industry, and the growing tendency to put a price tag on banking services rather than pay for them by cross-subsidising between different types of business. "The more sophisticated customer is more willing to pay for financial advice," says Sir David.

In other words, the personal customer tier of private banking is growing strongly as wealthy individuals seek better service and wider choice of products. This process can extend quite a long way down the ladder. Barclays, the largest UK bank, is offering branch customers with incomes of \$40,000 or more a year a private banking service which is in practice an investment and insurance sales operation to slightly up-market customers. In the US, Chase Manhattan has taken a similar approach, establishing a tier of "preferred" banking client.

International private banking remains vulnerable to political upsets. The Iraqi invasion of Kuwait was followed by the flight of Arab money from the Arabian peninsula to Cairo and London, traditionally safer havens.

Arab customers also began

to appreciate the advantages of offshore trusts in places like the Channel Islands, which were not subject to the blocking of accounts during the emergency.

The process has helped some private banking operations of high street clearers. "An account with Barclays or Lloyds doesn't attract as much attention as one with a glamorous private banking specialist name," says one banker.

The recession and the Gulf War have caused many clients to lower their expectations. "There is more emphasis in 1991 on security and safe custody than there was a year ago and less expected in the way of high returns," says one banker. "People are now happy to do nothing. They are more risk-averse, even the younger clients." Indeed, in the US, where the financial woes of the banking system have been front-page news, bankers report a "flight to quality" to those institutions whose capital is well above regulatory minimums.

Other new markets may

arise in a few years. It looks like being a few years before much private banking is done in eastern Europe or the Soviet Union, but there is a whisper

after their money.

INSIDE

■ The BCCI scandal: The bank founded as the vision of Agha Hasan Abedi wound up in a spiral of fraud. What has this meant for the image of private banking as a whole?

■ International round-up:

■ Luxembourg:

There is more than just

secrecy to make the

Grand Duchy attractive,

and bankers remain

confident in the face of

potentially threatening EC moves

■ Japan:

In a society in which more than 90 per cent consider themselves middle class, private banking becomes a mass market business

■ Switzerland:

Swiss banks still handle

40 per cent of world

business, but the

competition is intensifying

■ US:

The recession has been

soaring for bankers, and

they are returning to

traditional ways

Leading centres: UNITED KINGDOM

Gloomy talk in London meeting rooms

THE RECESSION in the UK economy has delivered an unexpected sharp blow to private banking business in London. In general meeting rooms of private banks in London, conversations between clients and account executives this year are haunted by the worries of an economic downturn: illiquid assets, particularly in the property market, company failures, and the prospect of a possible Labour government.

Account executives are retreating to a year or two in which their clients will want the accent to be on wealth preservation rather than wealth enhancement. Clients may have to be shared more than in the past, but this partly reflects their perception that good banking services are more necessary than ever.

"Now is the moment to have a good bank behind you, someone who can bank for both the man and his business. Busy people are still not always getting trustworthy advice," says Marcus Grainger, chief executive of private banking at Samuel Montagu, the private banking offshoot of Midland Bank.

While some banks say they have already had clients who have been hit by losses at Lloyd's, others have not. Coutts, with about 9 per cent of Lloyd's "names", says it has had few difficulties so far. Others even detect a counter-cyclical revival of interest in becoming a "name" at Lloyd's.

Yet the depression has not blunted the general belief that UK private banking is likely to get better as the 1990s advance.

Apart from the steady long term rise in personal wealth in the UK, many bankers point to the advantages London and the UK enjoy in private banking.

"London is a more natural international private banking centre than New York or Switzerland, for several reasons. It is already a big international banking centre, with a brilliant range of treasury products available."

"In Jersey it has one of the cleanest offshore centres in the world very close at hand. It has

got the infrastructure, it is less expensive than Switzerland, and has a good real estate market. And it is something of a tax haven," says Mr Alan Hogg, Head of International Private Banking at Barclays.

The entrepreneurial failures and collapses of the late 1980s have generated private banking opportunities as well as corporate finance problems. "You usually find that the entrepreneur involved ends up with at least several hundred thousand which needs managing," says one bank.

In dealing with all these different customers, bankers try to build up a strong personal relationship. Business usually goes to the private bank that gets the first telephone call for advice.

At Lloyds, asset management extends into every financial nook and cranny, as befits a bank noted for its cost-consciousness.

"I always say: 'Don't miss the small opportunities'. We always go for them, unless the client objects," says Wynford Johns, manager of UK private banking at Lloyds. "These would include a full £10,000 holding of premium bonds, which can be expected to yield small but useful tax free returns every month; a full entitlement of national savings certificates, and a Tessa account."

"Brokers try to flog you things, good advice costs a lot less," says Sir David Money-Coutts, chairman of Coutts & Co.

During the boom years of the 1980s, private banking was very fashionable. The last decade has seen a flow of new entrants to the private banking market. In 1984, Adam & Co set up in Edinburgh, the first new bank in Scotland for 140 years. Adam has grown strongly and is now believed to have a client base of around 2,000.

"We were the best capitalised new bank for a long time," says Mr Ian Dulake, director.

Eighteen months ago, Midland set up its new UK private banking operation in Samuel

Montagu, which is now believed to account for a fair slice of the £16bn of private banking assets under management with the group. Mr Gregson says Midland is looking for active customers, rather than just wealth-preserved, to whom it can offer Treasury and corporate finance products.

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PRIVATE BANKING 2

David Lascelles explores the impact of the BCCI exposure

A never-ending spiral of fraud

THE Bank of Credit and Commerce International will become an object lesson in how not to conduct a private banking operation.

The bank, which was shut down for alleged fraud in July, had become a caricature of private banking, taking to extremes the features other private banks like to market as qualities - a full range of services, utmost discretion, and a high level of personal attention. If you were a top-level client of BCCI, its staff would attend to your every need 24 hours a day.

But on the other hand you might also find that your accounts had been purloined to finance BCCI's latest venture.

The 20-year-old bank was founded as the vision of Pakistani-born Agha Hasan Abedi to create a "bridge" between the third and first worlds. Much of the bank was geared to perform ostensibly good works, and Mr Abedi was well known for his grand philosophical discourses. But he was also an influence-seeker, and increasingly he harnessed BCCI to his ambitions to create links with powerful people, particularly third world leaders.

BCCI was also born out of a banking tradition in the Indian sub-continent which is vastly different from the west's. Mr Abedi built on the assumption that the bank should take an interest in the families and personal affairs of its clients to

create a "full service" in the fullest sense, extending all the way from the most sophisticated international financial transaction, down to the procurement of sexual services.

BCCI's private banking operations were based on the accounts of exceedingly wealthy individuals from third world countries. They included the ruling families of Gulf sheikdoms, such as Abu Dhabi (a substantial shareholder in the bank), Dubai, Fujairah and Ajman. There were also prominent Arab businessmen such as Ghathor Pharaon, and Kemal Adham, the former head of Saudi intel-

ligence, and controversial figures like Manuel Noriega of Panama, now being tried for drug trafficking in the US.

But this class of client could also be divided into two groups. The first, which included the Ruler of Abu Dhabi, placed large sums of money with the bank, and used it to perform conventional banking services. A second group, which included Mr

Pharaon and Mr Adham, shared in BCCI's ventures by allowing their names to be used as nominees for BCCI's own investments.

For example, eight of BCCI's largest customers were lent more than \$1.4bn to enable them to buy shares in CCAH, BCCI's illegal banking acquisition in the US. According to Price Waterhouse, which reported on BCCI, these customers were under no obligation to repay the loans, and were effectively fronting for BCCI. Mr Adham was among the largest recipient of CCAH-related loans with \$450m.

But large depositors with BCCI also ran serious risks. Price Waterhouse found that BCCI diverted deposits to plug gaps in its balance sheet caused by bad lending or by trading losses. When the bank's treasury ran amok in the mid-1980s and huge losses had to be concealed, such diversions of deposits reached as much as \$1.3bn.

Some of these were deposits from wealthy clients which were never recorded as having been made. If these depositors sought to withdraw their money, the funds were simply siphoned out of another account, creating a never-ending spiral of fraudulent transactions.

Although BCCI's private banking services were supplied in its own name, they were actually conducted through a Cayman-based affiliate called

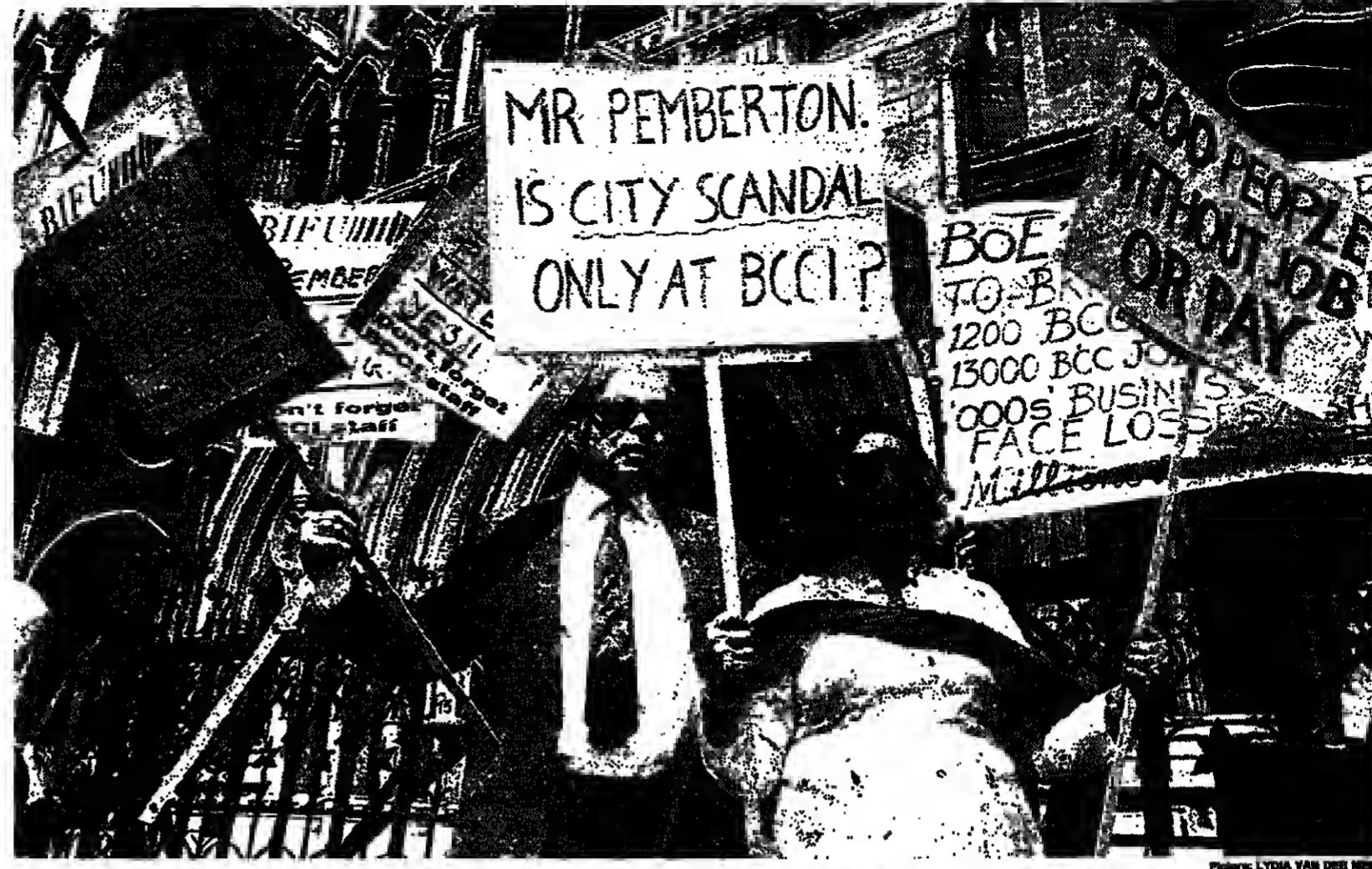


Photo: LYDIA VAN DER

BCCI rocked public confidence. Investors and employees in particular were losers - scenes outside the High Court in July say it all

gence, and controversial figures like Manuel Noriega of Panama, now being tried for drug trafficking in the US.

But this class of client could also be divided into two groups. The first, which included the Ruler of Abu Dhabi, placed large sums of money with the bank, and used it to perform conventional banking services. A second group, which included Mr

Pharaon and Mr Adham, shared in BCCI's ventures by allowing their names to be used as nominees for BCCI's own investments.

For example, eight of BCCI's largest customers were lent more than \$1.4bn to enable them to buy shares in CCAH, BCCI's illegal banking acquisition in the US. According to Price Waterhouse, which reported on BCCI, these customers were under no obligation to repay the loans, and were effectively fronting for BCCI. Mr Adham was among the largest recipient of CCAH-related loans with \$450m.

But large depositors with BCCI also ran serious risks. Price Waterhouse found that BCCI diverted deposits to plug gaps in its balance sheet caused by bad lending or by trading losses. When the bank's treasury ran amok in the mid-1980s and huge losses had to be concealed, such diversions of deposits reached as much as \$1.3bn.

Some of these were deposits from wealthy clients which were never recorded as having been made. If these depositors sought to withdraw their money, the funds were simply siphoned out of another account, creating a never-ending spiral of fraudulent transactions.

Although BCCI's private banking services were supplied in its own name, they were actually conducted through a Cayman-based affiliate called

ICIC. The precise nature and ownership of ICIC has yet to be established, but it appears to have been the part of the bank which handled the accounts of the super rich with hundreds of millions of dollars to deposit. Though located in the Caribbean banking haven, it was actually managed from BCCI's headquarters in the City of London.

In the end, of course, all these people lost huge sums of money when the bank was shut down with losses which have still to be calculated but clearly run into the billions of dollars.

All this, however, took place at the more lurid end of the bank's operations. There was a different and more humdrum aspect to BCCI's private banking business which was more legitimate. The management of

investments and deposits for private individuals took place as normal, and there was also a very active business servicing the accounts of Asian entrepreneurs in Europe - accounts where the personal and business interest ran in close parallel. A large part of this service included letters of credit, international money transfers and tax services.

The big question for the pri-

ivate banking business is whether BCCI has damaged its image. In one sense the answer must be yes. There always lurks a suspicion in the public mind that private banking is linked to the furtherance of objectives such as tax evasion, money laundering and fraud. This will have been reinforced by the revelations from BCCI.

It also seems likely that banking supervisors will be

taking a much tougher line from now on over private banking transactions which have a questionable air.

On the other hand, it is widely recognised that BCCI is untypical of the banking business in many senses. It would be wrong, therefore, to draw wide inferences. Its dramatic demise may even help to strengthen the sound and legitimate end of the market.

endure when the bad publicity from the July collapse of BCCI has long evaporated. BCCI registered in the Grand Duchy nearly 20 years ago and the IML, while sympathising with the bank's stricken employees and depositors, says the collapse was the legacy of a more lax supervisory regime which was not unique to Luxembourg and in any case has long since been tightened up.

Certainly there was no apparent rush to withdraw funds from other Luxembourg-registered banks. Indeed, the banking community is convinced that if, in the months and years ahead, there is any "flight to quality" in the world of private banking it will be into rather than out of the Grand Duchy.

As Mr Thiel of the bankers' association puts it: "The volume and the number of small and medium-rich will increase. This business must have a future."

Andrew Hill

Leading centres: LUXEMBOURG

The Grand Duchy remains confident

bourg as a private banking centre may also be indicated by the increase in minimum entry levels for Luxembourg depositors - which have reportedly risen from £100,000 to as much as £500,000

The increase in minimum entry levels have reportedly risen from £100,000 to as much as £500,000

to as much as £500,000 for a full discretionary service.

Part of the reason most of Luxembourg's 180 or so banks are now pinning their hopes on private clients is that the syndicated loan business has been somewhat sluggish recently.

Bankers are also conscious that Luxembourg may be losing its artificial attractions as a banking centre, at least compared with other centres. Withholding tax on interest income was recently cut in neighbouring Belgium, for example, and

there are rumours that harmonisation of EC banking regulations will put in jeopardy the strict banking secrecy rules which are always cited as one of the Grand Duchy's principal attractions.

There is, however, an increasing perception that it might be better not to stress secrecy as Luxembourg's principal private banking attraction.

"We don't want to attract customers only with these arguments," says Mr Lucien Thiel, general manager of the Luxembourg bankers' association. "Instead of a quantitative increase, we want a qualitative increase."

Bankers are also conscious that Luxembourg may be losing its artificial attractions as a banking centre, at least compared with other centres. Withholding tax on interest income was recently cut in neighbouring

Belgium, for example. Having succeeded in cornering a large part of the Eurobond market, Luxembourg - assisted by the swift legislative action of the Grand Duchy's government - has turned to developing other

financial products aimed at the private client.

In particular, Luxembourg was quick to adopt EC legislation on the clumsily named Undertakings for Collective Investment in Transferable Securities (Ucits) which allowed investment funds to be sold to residents of other EC countries.

Some 805 investment funds were registered by the end of last year, of which 618 qualified as Ucits

■ Product exploitation. Having succeeded in cornering a large part of the Eurobond market, Luxembourg - assisted by the swift legislative action of the Grand Duchy's government - has turned to developing other

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According to the IML, some 805 investment funds were registered in the Grand Duchy by the end of last year, of which 618 qualified as Ucits.

"Other centres which have aggressive and declared ambitions in that field are not making much progress," claims Mr Jaans.

These are the strengths Luxembourg bankers claim will

endure when the bad publicity from the July collapse of BCCI has long evaporated. BCCI registered in the Grand Duchy nearly 20 years ago and the IML, while sympathising with the bank's stricken employees and depositors, says the collapse was the legacy of a more lax supervisory regime which was not unique to Luxembourg and in any case has long since been tightened up.

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Andrew Hill

Leading markets: JAPAN

A mass market business

THE Industrial Bank of Japan's involvement in recent financial scandals and its extensive loans to a restaurateur in Osaka shocked the financial community both within and outside Japan.

In the late 1980s, due to the low cost of capital, margin business with the larger companies became thinner for the Japanese banks. The new strategy was to shift the focus to a lucrative commission and fee business, targeting wealthy individuals.

Eager to make inroads on the market, IBJ set up a private banking division in 1988.

The bank admits lax screening guidelines led to its involvement in the scandal in which the bank lent up to Y240bn to Ms Nui Onone, who faces charges of procuring illegal loans to fund stock market investments.

'They were just unlucky,' says one banker of the scandal-struck IBJ

However, most Japanese bankers are sympathetic. "They were just unlucky," says one banker. IBJ, Japan's most prestigious bank, had not had the connections or skills to expand into personal banking, yet was under great pressure to do so as other banks rushed to target the retail market.

In spite of the focus on high wealth individuals, private banking in Japan remains quite different from that in the US and Europe, as segmentation of retail banking between wealthy and "ordinary" individuals does not exist.

In a society in which more than 90 per cent of people consider themselves middle class, Japanese banks have approached retail banking by using mass marketing strategies. Foreign bankers compare Japanese banks to supermarkets as opposed to the boutique image of the private banks in the west.

Japanese banks can only offer high net worth individuals the same instruments as a foreign bank. The strategy is to develop a relationship by giving small discounts on fees and commissions, and offering advice on tax.

Private banking had not been recognised until recently in Japan for several reasons. The wealthier individuals have tended to hold their assets in stocks and land, and have few liquid assets. They thus look for ideas on tax avoidance rather than new forms of investment.

Investment instruments a bank can offer are limited due to financial regulation which prevent banks from entering the retailing securities.

Citibank, however, has succeeded in establishing its private banking division in Japan. It is one of the few foreign banks which has chosen to jump into retail banking in Japan, and now has 16 retail branches in the country, where other foreign banks such as Chase Manhattan Bank have made unsuccessful attempts at breaking into the private banking business.

Citibank has managed to attract high net worth individuals - those with about Y200m in investable assets - frustrated with being treated the same as the "ordinary" customer. Its highly qualified staff have also helped create a glossier image of private banking.

Citibank's private banking division manages assets of around Y200bn to Y300bn. It has about 2,000 clients, of whom 70 per cent are presidents and owners of small and medium sized companies which have a relatively large cash flow. About 20 per cent are wealthy professionals such as doctors and lawyers.

Mr Yuji Nishimura, vice president of Citibank's private banking division, says the bank does not intend to increase clientele in the private banking division, as tailor-made service would be impossible.

The bank has taken a

long-term view of the private business. Mr Nishimura says clients are not ready to deposit a large chunk of their assets in a foreign bank. The strategy is to develop a relationship by managing and growing up to cash flow business, such as overseas investments and tax laws.

Many Japanese banks which entered the private banking business in the late 1980s have been knocking on Citibank's door in order to find out what services the bank is offering.

"There have been several requests for interviews from various financial institutions

The sharp increase in the number of high net worth individuals reflects the rise in asset values

including insurance companies," says Mr Nishimura.

The Bank of Tokyo, which recently set up a private banking department, says the number of high net worth individuals has increased sharply, reflecting the rise in asset values and the fact that there is high demand for products.

One problem the personal banking business faces is the loose legal structure, which leaves defining the fine line between tax avoidance and evasion up to the interpretation of tax authorities.

Since private banking services offered by the Japanese banks have tended to centre on advising clients on tax avoidance schemes using legal loopholes, the ambiguity has created problems.

A recent probe by authorities into tax reports of Mr Tadao Yoshida, the president of YKK, the world's largest

assessment for inheritance tax, the incident sent jitters through the financial community.

High profile figures have become wary and are more reluctant to use private banking products. And although a large demand still exists especially for products involving off-shore investments, some foreign banks which do not want to be identified with the shadowy connotations of private banking, have chosen not to enter the market.

Emiko Terazono

PRIVATE BANKING



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PRIVATE BANKING 3

Leading centres:
UNITED STATESA shift back
to traditional
ways

BY ALL accounts, the flavour of US private banking has been decidedly different from that of its European counterparts. It has concentrated with equal fervour on wealth protection and wealth creation.

During the go-go years of the 1980s, however, the emphasis shifted heavily in favour of wealth creation as banks tried to provide a wide variety of credit services to help make rich people richer. Loans secured by private wealth in the form of real estate or securities became the main focus of private banking services.

But the recession of the past two years has been a sobering experience for lenders, and private banking divisions have not been exempted from the loan losses that have eaten into bank balance sheets.

Now, American private bankers say, there is a shift back to a more traditional approach, which concentrates on managing the investments

Focus now is on managing investments rather than lending for entrepreneurial pursuits

of the wealthy rather than lending them money for entrepreneurial pursuits.

"There has been a gradual shift towards investment and fiduciary activities, away from credit-driven services," said Mr Thomas Clark, chairman-elect of the American Bankers' Association's private banking committee.

Indeed, Mr David Van Pelt, senior vice president at Citicorp's private bank - one of the largest providers of services in the US - acknowledged that his bank, too, is shifting gears.

"There will be greater emphasis on asset management," he said.

The bank has been toning its record in asset management, producing figures showing that it has outperformed Lipper Analytical's indices in all sectors over the past five years.

On the credit side, Mr Van Pelt said Citicorp's private bank "has had a higher than normal loan loss experience in the US due to lending secured by commercial real estate".

Not only have real estate values plummeted, but many wealthy individuals secured credit based on their holdings of shares which have fallen sharply in value with the recession.

Asil Nadir, for example, was a large private banking customer at one US bank, securing loans backed by his holdings in Polly Peck International.

And while Citicorp is still firmly in the business of credit-driven private banking, it is taking a much harder look at the collateral provided. Stock portfolios are still acceptable, Mr Van Pelt said, although higher margins may be required.

Customers, too, are taking a harder look at credit quality. Mr John Hoyer, senior vice president at US Trust - whose capital ratios far exceed those required by regulators - said that some of the bank's new business has been spurred by a "taste for quality".

US Trust provides trust and private banking services exclusively, having given up commercial lending in 1987.

Meanwhile, other banks have decided that taking their private banking services downmarket to less wealthy individuals was a mistake.

"We're going upscale," said Mr Jim Sommers, group executive vice president in charge of private and trust banking at NCNB, America's largest super-regional bank.

"We're reducing the number of clients we take in, and revising the criteria. Private banking can't be done as a broad-based business."

Norma Cohen

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Leading centres: SWITZERLAND

Working harder for the slot at the top

SWISS private bankers are in an unusually turbulent time, but their country's standing as the leading centre for international private banking remains intact. Although the emphasis on privacy makes it impossible to track the business statistically, most bankers accept consultants' estimates that Swiss banks handle 40 per cent or more of the assets placed under management worldwide. By comparison, London is usually given between 10 and 15 per cent, with New York slightly lower.

But the competition is intensifying. The Swiss banks' earlier comparative advantages - secrecy, a sound economy, absence of currency controls, political and monetary stability - are being eroded. Moreover, over the past two years the Swiss have had to adjust to domestic deregulation, which has started to dismantle the cartel-like arrangements that enabled them to price their services at a level high enough to ensure a reasonable living even for the laziest.

The traditional bank that looks at private banking in the traditional sense would be left high and dry," she said. Chase's Talbot said, "has really wrestled with going downscale."

But rather than pursue less wealthy customers, Chase has established a middle tier of private banking client called the "preferred customer". While the services are not as elaborate as those offered to private banking clients, it allows Chase to package other banking services, including those of its trust department, to these individuals.

Private banking in America is a relatively recent phenomenon. The ABA's private banking committee was formed only five years ago, in contrast to Swiss and London banks which have been offering discreet private banking services for hundreds of years.

The explosion of personal wealth in the 1980s led banks to seek to fill a niche. It was discovered the market for private banking services had grown well beyond the traditional market of elderly people with inherited wealth.

Chase's Talbot notes that currently only 20 per cent of assets are passed on intergenerationally, spelling the death knell for those banks whose efforts consisted

It is their expertise in fund management and fiduciary services that has given merchant banks an edge

simply of capturing "old money".

Meanwhile, as the commercial banks piled in to private banking, competition from investment or merchant banks was stepped up. It is their expertise in fund management and fiduciary services - basic private banking - that has given them an edge.

Brown Brothers Harriman is frequently named as an investment bank providing European-style asset management in the traditional mould.

Mr Clark notes that investment banks have a competitive edge in recruiting wealthy clients because they often have an existing relationship.

For instance, the investment bank which handles the initial public offering of shares for an individual's company could well offer to help him invest and manage it.

"Investment banks are right there when the money changes hands. They can say: 'We'll manage that for you', be said.

Several investment banks, including Merrill Lynch and Goldman Sachs, have trust departments to take on private banking functions.

Norma Cohen

bankers say this remains a potential rather than an actual threat. The price war has not yet started.

Swiss private banking is in the throes of readjustment. "Before, we could wait for customers to come to us. Now we have to travel in search of new clients, and we have to provide a range of investment services. The dismantling of the cartel that determined brokerage fees has worked to the disadvantage of the smaller independent managers, because the big banks now demand that the managers

lie managers who are estimated to be responsible for around 8 per cent of the assets under Swiss management. A few have merged, others have returned to the service of banks short of good investment managers. The dismantling of the cartel that determined brokerage fees has worked to the disadvantage of the smaller independent managers, because the big banks now demand that the managers

the US banking crisis, has created a separate private banking business and switched its headquarters for Europe, the Middle East and Africa from London to Geneva.

Among UK banks, National Westminster, following the earlier example of Lloyds, announced it was consolidating its private banking business - under the Coutts label - and was placing its international operations in Switzerland.

switching accounts to banks with first-class names," one banker said. On the other hand, fewer clients than expected have changed their accounts to banks offering lower charges after the dismantling of the cartel that fixed brokerage fees. This may be because competition in pricing is still only in a phone-in stage; none of the big banks has yet radically changed its pricing structure. Some banks believe, however, that the rate war will start when competition intensifies.

At the end of September the federal parliament voted to ease the stamp duty charges which the banks have been claiming for years handicapped the Swiss financial centre in competition with deregulated rival centres. This reform will be more to the advantage of banks with a high share of assets from institutions or from individuals with large investment portfolios than to banks with a preponderance of lower net worth clients, but parliament's decision was welcomed as removing a clog on Swiss competitiveness. However, the partial removal of the stamp duty has still to be confirmed; the socialist party could call for a referendum on the issue.

William Dulliforce

The dismantling of the cartel that determined brokerage fees has worked to the disadvantage of the smaller independent managers, because the big banks now demand that the managers

generate a higher level of broking before they can share in the brokerage fees.

Changes in the private banking strategies of the foreign banks operating in Switzerland illustrate the readjustment. Union Bank of Switzerland, Swiss Bank Corporation and Credit Suisse - which were already the largest players worldwide in the private banking game.

Another feature of the past year has been the consolidation among independent portfo-

lios managers who are estimated to be responsible for around 8 per cent of the assets under Swiss management. A few have merged, others have returned to the service of banks short of good investment managers. The dismantling of the cartel that determined brokerage fees has worked to the disadvantage of the smaller independent managers, because the big banks now demand that the managers

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But as part of its reorganisation, Chase Manhattan, which last year appeared to be one of the big banks most affected by

land Zurich, although Lloyds chose Geneva.

Recent changes among the elite Geneva private banks have also reflected divergences in strategy. Darier and Hentsch have merged, in order to achieve sufficient size to be able to attract institutional clients. Darier, on the other hand, broke with tradition by taking on a non-family partner, but declared it would still concentrate on developing its niche among private clients.

At first blush, Chase's decl-

Why take a loan?

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Fixed Int	154.1	162.1	-0.6											
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Far East	81.3	88.4	-0.6											
Fixed Int	74.7	81.9	-0.6											
Income Lkd	70.2	81.9	-0.6											
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FT SURVEYS

AMERICA

Profit-taking sets in as hopes of Fed move fade

Wall Street

SHARE PRICES fell yesterday morning after bond yields had risen sharply on fears that the Federal Reserve might have postponed an easing of monetary policy, writes *Patrick Harwood* in New York.

By 1 pm the Dow Jones Industrial Average was down 22.36 at 3,054.79. The more broadly based Standard & Poor's was also weaker at mid-session, down 3.08 at 339.42 by 1 pm, while the Nasdaq composite of over-the-counter stocks shed 2.61 at 536.29.

Turnover on the NYSE was \$4m shares by 1 pm, and declines outpaced rises by almost two to one.

The morning sell-off was understandable. In the previous five days the Dow had risen by almost 10%, buoyed by hopes of easier monetary policy and by better-than-expected third quarter corporate results. To many, it looked overpriced at around 3,070, and some investors took the opportunity to realize recent profits. With the likelihood of an imminent Fed ease rapidly diminishing, the pressure to sell was irresistible for some investors, and a rise in the long bond yield to

back over 8 per cent did not help matters.

Airlines, which powered the Transportation index to new highs last week, took a pounding on profit-taking. All those that rose last Wednesday on good results from AMR, parent of American Airlines, fell back yesterday. AMR lost 5% at \$63.3. Delta gave up 3% at \$73.7, and UAL slipped 1% to \$132.3. Southwest Airlines, which reported a 27 per cent decline in third quarter net profits, fell 1% to \$26.5.

Owens-Corning, which fell sharply on Friday after reporting poor third quarter earnings and plans for two quarterly charges next year, dropped another 34% to \$19.6 on turnover of 2.3m shares. Merrill Lynch downgraded the stock and cut its earnings estimate.

Chase Manhattan firmed 5% to \$18.2 after the banking group reported a sharp gain in earnings, with profits of 79 cents a share in the third quarter, compared to a \$5.03 a share loss at the same stage of 1990. Other banks were mostly weaker, with Citicorp easing 3% to \$11.7, BankAmerica 3% to \$22.4, and Security Pacific 3% to \$32.6, although Chemical bucked the trend with a gain of 3% to \$25.6.

EUROPE

Strikes hit Paris and Milan as Frankfurt sees takeovers

THE THREAT of general strikes worried the French and Italian bourses yesterday, writes *Our Markets Staff*.

PARIS retreated after unions called for a general strike to be held on Thursday. The CAC 40 index lost 18.25 or 1 per cent to 1,845.97 in turnover similar to Friday's FFr1.9bn.

The public sector worries and last week's long-awaited interest rate cut meant that the bourse was likely to remain subdued in the short term, said Ms Jennifer Schaps at Williams de Broe. "The small size of the rate cut means that it will have no significant impact on French industry, and it precludes further movement on rates in the short term," she said.

Lafarge Cépée, the cement maker with exposure to the US, dropped FFr7 to FFr36.50. Recovery in the US economy had been over-discounted in the share price, said Ms Schaps. A Lafarge unit said that it had an option to buy 49 per cent of Texia of Spain.

Socia, the trading group, plunged FFr3.90 or 1.8 per cent to FFr21.10 in active trading of 776,900 shares on Friday's news that it plans a capital increase.

MILAN failed to hold on to opening gains. There was concern that the general strike would hamper trading. The Commit index rose 1.31 to 532.32 in turnover estimated at slightly more than Friday's L88bn.

Analysts noted continued demand for telecommunications stocks. Sip put on L10 to L1,250 while Stet added L4 to L1,950. Investors were encouraged by evidence that Stet's new four-year investment plan showed annual investment levelling off at L11,000bn a year.

FRANKFURT had a quiet day in spite of takeover stories. Equities registered a technical recovery, the DAX index closing 9.43 higher at 1,572.68 after a 5.24 rise to 646.06 in the FAZ.

Banks and the big insurers, still enjoying the strength in the bond market, supported

the market. Mannesmann's takeover of 51 per cent of VDO Adolf Schindling, the measuring and control technology company, left the bidder DM45.0 lower at DM262 before it recouped to close at DM265.20.

VDO was suspended. Siemens, DM2.30 higher at DM623.10, said it was sorry that its own courtship of VDO had not succeeded and then bid DM225 a share for the 22 per cent minority in Siemens Nixdorf after hours. Siemens Nixdorf was up DM2 at DM180.

Before that, it had been showing a loss of more than 40 per cent on its end-1990 level.

Mr Ian Macleod, technology industries analyst at County New Zealand, said that the cost of consolidating all, instead of part of Nixdorf's expected losses this year – and of paying for the privilege – could reduce Siemens's expected 1991-92 earnings from DM445.5 a share.

ZURICH, which climbed last week to the position of top European performer in the FT-Auctaries World Indices this year, in local currency terms, finished lower as Wall Street's weak start encouraged profit-taking. The Crédit Suisse index 0.7 pc to 510.3.

ISTANBUL fell on technical grounds, led by the prime minister's resignation yesterday. The 75-share index, up 3 per cent on Friday, fell 58.03 or 2.2 per cent to 2,597.03 in light trading.

Mr Kaya Didman of Turk Ekonomi Bank said that the uncertainty was likely to persist until a new government was formed. Until then, the index would fluctuate around

FT-ACTUARIES WORLD INDICES

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FRIDAY OCTOBER 13 1991													THURSDAY OCTOBER 17 1991												
NATIONAL AND REGIONAL MARKETS		US	Day's	Yield	Pound	Yen	DM	Local	Yield	US	Day's	Yield	Pound	Yen	DM	Local	Yield	1991	1991	1991	Year ago				
Figures in parentheses show number of lines of stock		Index	Change	Yield	Sterling	Index	Index	Yield	Yield	Index	Change	Yield	Sterling	Index	Index	Yield	1991	High	Low	(approx)					
Australia (89)	156.42	+0.1	134.44	128.21	187.32	130.47	+0.1	4.65	156.28	135.44	128.21	138.40	130.28	156.42	112.74	126.70									
Austria (20)	165.99	+0.8	140.95	134.51	143.95	114.95	+0.2	1.98	162.77	141.08	133.53	144.13	144.03	222.37	154.82	205.18									
Belgium (47)	128.92	+0.2	110.80	105.71	113.17	110.80	-0.2	5.35	128.47	111.35	105.40	113.77	111.04	151.20	118.04	136.76									
Canada (114)	140.23	+0.4	120.43	115.01	123.05	114.29	+0.1	3.85	140.66	121.08	114.04	123.05	121.17	142.27	126.49	123.25									
Danmark (87)	230.25	+1.4	216.02	205.25	216.69	205.25	+0.9	1.59	230.79	210.90	205.49	220.85	210.55	220.55	217.74	229.27									
Finland (15)	140.44	+0.4	70.99	75.01	74.59	70.99	+0.0	3.26	135.35	73.58	70.03	75.55	74.88	135.35	83.65	100.16									
France (101)	141.01	+1.1	121.20	115.85	122.73	127.35	+0.3	3.49	130.48	120.90	114.44	122.52	122.22	122.22	125.35	94.15	117.80								
Germany (65)	105.09	+0.9	90.33	86.21	92.25	90.22	+0.0	2.45	104.13	90.25	85.45	95.45	95.45	102.90	101.11	102.90									
Hong Kong (56)	105.82	+0.0	142.26	133.73	145.30	146.74	-0.1	4.43	105.57	143.51	135.85	146.64	146.90	168.98	116.62	121.23									
Ireland (18)	158.36	+0.1	136.28	130.06	139.19	141.38	-0.7	3.54	158.86	137.52	130.18	140.52	142.40	182.46	132.85	159.10									
Italy (77)	70.47	+0.5	60.56	57.79	81.86	88.42	-0.3	3.49	70.10	60.76	57.51	60.76	60.76	88.23	64.75	85.85									
Japan (474)	143.72	+1.4	121.52	117.97	128.18	117.87	+1.4	0.72	141.75	122.86	118.30	125.55	118.30	148.97	118.23	138.29									
Malaysia (68)	155.05	+0.4	167.85	160.17	171.43	162.57	-0.5	2.95	196.15	170.02	160.94	173.75	207.57	247.79	168.18	189.93									
Mexico (16)	131.20	+0.4	128.14	107.95	115.22	139.45	+0.4	1.20	130.78	113.60	107.03	115.20	137.00	147.84	131.20	151.80									
Netherlands (31)	140.98	+0.4	121.15	115.91	122.45	114.14	+0.5	4.35	140.98	121.45	114.45	122.73	145.73	125.73	132.37										
New Zealand (14)	190.05	+2.2	163.95	155.88	166.84	171.03	+1.7	1.85	185.27	161.11	152.51	164.02	166.15	223.24	175.55	240.13									
Norway (31)	181.43	+0.2	154.53	157.01	168.05	148.35	+0.0	2.31	191.49	165.97	157.11	169.58	149.32	208.25	157.45										
Singapore (38)	141.43	+0.2	120.26	117.24	127.24	117.07	+0.2	2.85	125.11	120.26	117.07	120.26	120.26	126.75	117.07										
South Africa (61)	247.47	-0.3	212.69	202.95	217.24	170.57	+0.2	2.85	246.16	215.11	203.62	216.79	210.55	256.85	173.00	160.25									
Spain (53)	151.90	+0.8	130.46	124.50	133.25	122.53	+0.3	4.47	150.58	130.92	123.55	133.38	122.18	171.12	131.51	147.80									
Sweden (26)	180.51	+1.0	155.14	148.05	158.46	154.81	+0.4	2.71	178.72	164.91	146.84	15													

NETWORKING AND OPEN SYSTEMS

SECTION III

THE COMPUTER INDUSTRY The computer industry and its customers have been shaken and confused by the speed of development of the open systems movement. Yet the emergence of industry-wide standards promises a new era of efficient and effective computing, writes Alan Cane

The age of the answer

THE GLOBAL computer industry is in crisis with a majority of companies showing reduced sales and profits. A major cause is the rapid rise of open systems which are forcing down hardware prices.

Computer users worldwide are faced with a bewildering choice of computing options and many are holding back from further investment in data processing until the confusion dies down. Again, a major cause is the growth of open systems.

It is ironic that open systems are harming computer suppliers and confusing customers; they have been heralded as an important stage in the maturation of the modern computer industry, yet seem to contain the seeds of its destruction.

From the customers' point of view, open systems should open the door to a new era in efficient and effective computing. Open systems should give them "freedom of movement" in three key areas: portability, compatibility and scalability.

Portability will give them the freedom to move across different computer makes and models. Compatibility will give them the freedom to move easily from one open system to the next as technology

changes. Scalability will enable them to move between systems of different sizes.

Mr Geoffrey Morris, president of the International X/Open group, which "itemarks" open systems-compliance products, points to the masses of data trapped in "closed and isolated information ghettos of government and corporate systems around the world".

"We have got to get out of those information ghettos and get rid of the constraints. Now people have been able to ask questions of information systems but they seldom have been able to get the right answers - or even an answer that is close to their question. Tomorrow has got to be the age of the answer."

But first the confusion will have to be dealt with. Open systems can be defined in as many ways as there are people prepared to commit themselves to a definition. There are, in addition, geographic variations. In Europe, the term traditionally means computer systems which obey the rules of open systems interconnection (OSI) and so can be easily connected together. In the US, an open system is more likely to be taken as meaning one which uses the Unix operating



system or one of its variants.

To all intents and purposes, however, "open" in computing terms simply means obeying agreed industry-wide standards. Virtually every manufacturer should be connected together if they are to function as part of the same network.

OSI is a set of rules which sets out in detail how computer systems of different manufacturers should be connected together if they are to function as part of the same network. Before the world's standards bodies had begun work on OSI, International Business Machines, which has been responsible for imposing more standards on the data processing business than any other manufacturer, had developed its own rules, Systems Network Architecture (SNA) for the interconnection of IBM

The development of the open systems movement occurred in two phases, the first chiefly concerning OSI, a long-drawn out battle by the world's standards bodies to establish the rules of the game, the second a frantic jockeying among the major computer groups to become associated with whichever version of the Unix operating system will become the world standard.

The personal computer operating system MS-DOS is an open system, although one imposed on the industry through the success of the IBM personal computer rather than agreed by industry participants. Some 35,000 computer programs have been written to run under MS-DOS.

Nobody could pretend that it has much elegance as operating software, but any software developer writing an application programme to run under MS-DOS knows there is a huge market for his efforts.

systems into networks. Companies wishing to attach their equipment to IBM networks had to obey SNA rules. There was, therefore, powerful pressure, especially from European computer companies, to establish OSI as the world interconnection standard, so depriving IBM of its advantage and "levelling the playing field".

Systems built from standard microprocessor chips and running a standard Unix operating system command inherently smaller gross profit margins than proprietary systems. Even if its installed base is quite small - figures suggest that spending on Unix-based systems may be only 1% per cent of the total hardware investment in the US at present - the presence of low-cost, powerful Unix machines in a manufacturer's catalogue has the effect of depressing the price of proprietary systems.

Ms Pauline Swift, a senior consultant with the Programming Group, argues that as hardware is becoming more marginal to the creation of value in computing, defining how computers are used and not how they are manufactured will become the world standard.

leading software developers want to write programs for the broadest possible market - in other words, for the most successful operating system.

Systems built from standard microprocessor chips and running a standard Unix operating system command inherently smaller gross profit margins than proprietary systems.

Third and most important, suppliers will get limited value from slavish adherence to open standards. There must be latitude to differentiate themselves one from another if anybody is to make money in the open systems marketplace.

The Unix bandwagon may seem a small development in a world full of warring factions - the ACE consortium including Compaq and the Santa Cruz Operation and the new alliance between IBM and Apple are just two examples. But it does suggest there is light at the end of the Open Tunnel both for suppliers and their customers.

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NETWORKING AND OPEN SYSTEMS 2

Progress is at last being made on getting computers to communicate, reports George Black

Popular wave for computing's 'Esperanto'

OPEN SYSTEMS Interconnection, the International Standards Organisation proposed method of getting all makes of computers to communicate, is regarded by cynics as the industry's Esperanto.

They say the idea of a universal language is just a pipe dream. But there have been signs recently that they could eventually be proved wrong.

OSI has been built on a seven-layer model of the data communications world, ratified in 1983 and developed within the committee of the ISO. Experts comment that there are few areas of the model which are still completely blank.

Yankee Group Europe surveyed the European market last year and concluded that there was still a vicious circle created by users waiting for products and suppliers waiting for demand. But nearly half of the largest users had embarked on OSI implementation. Three-quarters of those in the public sector had done so, but in the private sector the trend was a lot more sluggish. Banking and finance firms were the keenest.

Mr Nick Bush, a senior consultant at Butler Cox, likewise sees indications of that vicious circle beginning to be broken. "IBM and Digital now support many of the major OSI standards. The picture is not so

bleak as some have been painting it," he maintains.

Europe was the leader in OSI in the 1980s, with leading manufacturers such as ICL and Bull backing the movement. The European Commission's European Procurement Handbook for Open System (Ephos), one of the prescribed books for prospective suppliers and users, is OSI-based.

OSI is being driven to a great extent by governments. Gosip (the government OSI profile), a simplified version introduced in 1988 by the UK government's central computer and telecommunications agency (CCTA), has been adopted by European governments and become a catalyst for OSI.

It lays down the open systems conditions which must be met by bidders for public sector contracts. OSI's promoters think that Gosip will soon be endorsed by private companies, too.

The US government adopted Gosip last year, with minor amendments. But in the US there is still much less interest in OSI than in Europe.

In the UK open systems have been popularised since the mid-1980s by the Department of Trade and Industry. This had a beneficial effect in stimulating the market, but also raised expectations before many OSI



options were available. There was an over-reaction of scepticism which needs to be overcome.

Many users setting up Unix networks have preferred TCP/IP to OSI, though often seeing it as only a temporary solution on the way to OSI.

The DTI still believes that OSI will be the eventual winner, though it concedes the evolution is taking longer than it expected. In the short term, it says, pragmatic solutions such as TCP/IP may be needed, but in the long term OSI should prove more robust and have fuller functionality.

An OSI products guide, published by Technology Appraisals with research funded by the DTI, goes into its second edition shortly; it lists hundreds of products from around 80 suppliers.

The first edition did not sell between machines based on Unix open operating systems.

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as well as hoped; an official said prospective OSI users were still being very cautious.

But he thought the barrier was now mainly psychological.

The DTI is to publish an OSI migration guide to complement the products guide. Some top vendors are likely to bring out their own literature to encourage users to make the move.

Each of the three big trading blocks - the US, Europe and the Pacific Basin - now has its own forum or workshop for determining how OSI standards can be implemented and reflecting the content of Gosip.

To the outside, the world of OSI seems to have so many administrative and advisory bodies that the mechanism appears absurdly complicated and more likely to hinder than help the diplomatic process. Insiders argue that the nature of the subject is just so complicated that this is the only way it can be done.

Progress is being held up by a lack of flesh on some of the bones of the ISO model. This is especially true at the higher levels, affecting the user's applications, such as transaction processing and network management.

Transaction processing has had to wait while other applications such as file transfer and electronic mail, seen as

more urgent by users, were being addressed.

The rapid spread of Unix-based systems in the past few years has turned OSI-based transaction processing into one of the users' priorities. The vendors are now scrambling to make such systems work.

As a result of the remaining inadequacies of the OSI model, acceptance of its standards is patchy. X.25 is a well-established OSI standard for connecting equipment in packet-switched networks. FTAM (File Transfer Access Mode) has been popular in Europe as a standard for file transfer.

But although users say they want OSI-based electronic mail and network management, they have been slow to take up the options, X.400 and X.500. Nor has MapTop, the Manufacturing Automation Protocol/Technical and Office Protocol, advanced as quickly as its advocates supposed it would.

OSI products vendors are having to be patient and find other sources of income while the market emerges. Dowty Communications has been marketing a range of OSI hardware and software products for around four years now. Mr Chris Anderson, its marketing manager, says that up to now there has been more interest in its TCP/IP range than in OSI.



Mr Geoffrey Morris, president and chief executive of X/Open, a consortium of computer suppliers and customers which aims to create a common applications environment (CAE) based on the most useful formal and de facto standards. "Tomorrow has got to be the age of the answer" he says.

Systems Network Architecture

Pressure on IBM grows

WHEN IBM moved its networking systems headquarters from the US to the UK this year, it recognised the paramount importance of the issue to its biggest European customers.

Networking is at the top of their agenda, as the single European market approaches and the eastern half of the continent becomes accessible.

About 40,000 of IBM's users worldwide rely on Systems Network Architecture (SNA), its proprietary method of connecting computers.

SNA was introduced in 1974, originally to handle the need for a single terminal to address several applications. Before long, standardisation was being demanded as users wanted to link equipment from various vendors.

In 1982 IBM began to respond by opening up SNA. In 1986, when it launched Open Communications Architecture and published details of the SNA interfaces, IBM allowed other manufacturers to connect to its machines.

The primary need among the largest IBM users at that time was to be able to manage

IBM has invested in OSI. But it regards SNA, still dominant in the IBM user community, as the networking standard

communications between IBM mainframes and Digital VAX minicomputers. IBM had to acknowledge the permanent place of Digital in the industry.

The changing balance of power was shown by its establishment of a Multivendor Coexistence Centre in Dallas, Texas, and a similar one in France, aimed at coping with the practical problems of interconnection with VAXes and other equipment.

From the mid-1980s, information technology directors began to want a language which would be common to all makes of computer; that language was intended to be Open Systems Interconnection (OSI), the standard being developed by the International Standards Organisation.

IBM therefore invested in OSI in parallel with SNA. But it still regards SNA as the de facto networking standard. SNA remains dominant in the IBM user community, where OSI has so far gained only around 100 users.

The reason for this, according to Mr Bob Anderson, manager of marketing communications for IBM Networking Systems, is simply that developing OSI was a lot harder than anyone anticipated.

"It probably should not surprise us that OSI has taken so long," he says. "It is not like an electric plug. There are so many difficulties to be overcome to get two systems to connect properly."

Mr Anderson argues that users today still see SNA and the US Defense Department's TCP/IP (Transmission control Protocol/Internet Protocol) as immediately practical solutions, whereas they see OSI as their hope for the future. Asked to predict the future take-up of OSI, he says: "Everyone, everywhere - some day."

Many commentators believe that IBM is deeply negative about OSI, as well as about open operating systems based on Unix software, because its profits rely so heavily on proprietary systems.

Though IBM is well represented on open systems standards bodies, its role is that of observer rather than supporter, critics claim.

But Mr Anderson insists that while OSI is still immature IBM has no choice but to continue to give priority to SNA. So IBM's Raleigh, North Carolina, SNA research and development operation is still funded more highly than its

Rome OSI laboratories. IBM has substantially increased its investment in OSI since 1988, when it announced its OSI Communications subsystem to let its users communicate with non-IBM machines through OSI protocols. But Mr Anderson believes that SNA, OSI and TCP/IP will coexist for the foreseeable future.

At present, SNA is the best choice for the mission-critical applications of major users, with the richest set of software to support it, he says. Many of the world's largest organisations - banks, manufacturers, public bodies - would grind to a halt if their SNA system failed.

In the US, SNA certainly still enjoys user's confidence, partly because of greater loyalty to IBM than exists in Europe and partly because of fundamental differences in the markets.

Some users, however - mainly in Europe - have been pressing IBM to move faster towards OSI. These users typically want less focus on the IBM mainframe and want to adopt some OSI standards such as X.25 for connecting equipment to packet-switched data networks.

IBM has sought to reassure this pressure group. Last year it made a strong endorsement of the Gosip (Government OSI Profile) protocols which are essential to bidders for public sector contracts.

In September it made a set of announcements of products and intentions for networks, including clarification of its Systems Application Architecture (SAA) framework and within SAA its SystemView strategy covering SNA and OSI.

The announcements focused on its NetView product, which enables users to view and control their multi-vendor networks from a single workstation. In promoting NetView, IBM is playing to its SNA strengths, as users generally see SNA as much superior to OSI in network management.

In promoting NetView, IBM is playing to its SNA strengths, as users see it as superior to OSI in network management

View International Alliance, says that all the vendors have underestimated the effort needed to make OSI work.

In setting up the alliance, IBM was acknowledging that it needed help on both SNA and OSI, he adds. IBM will work through "design councils", an inner circle of systems software specialists, to try to sort out the troubles of multi-vendor sites.

Mr David Williamson, managing director of IBM Computing, which serves many IBM users, says that IBM is coming under increasing pressure to move faster towards OSI, especially as a result of the growing success of its Unix-based RS/6000 mid-range machines.

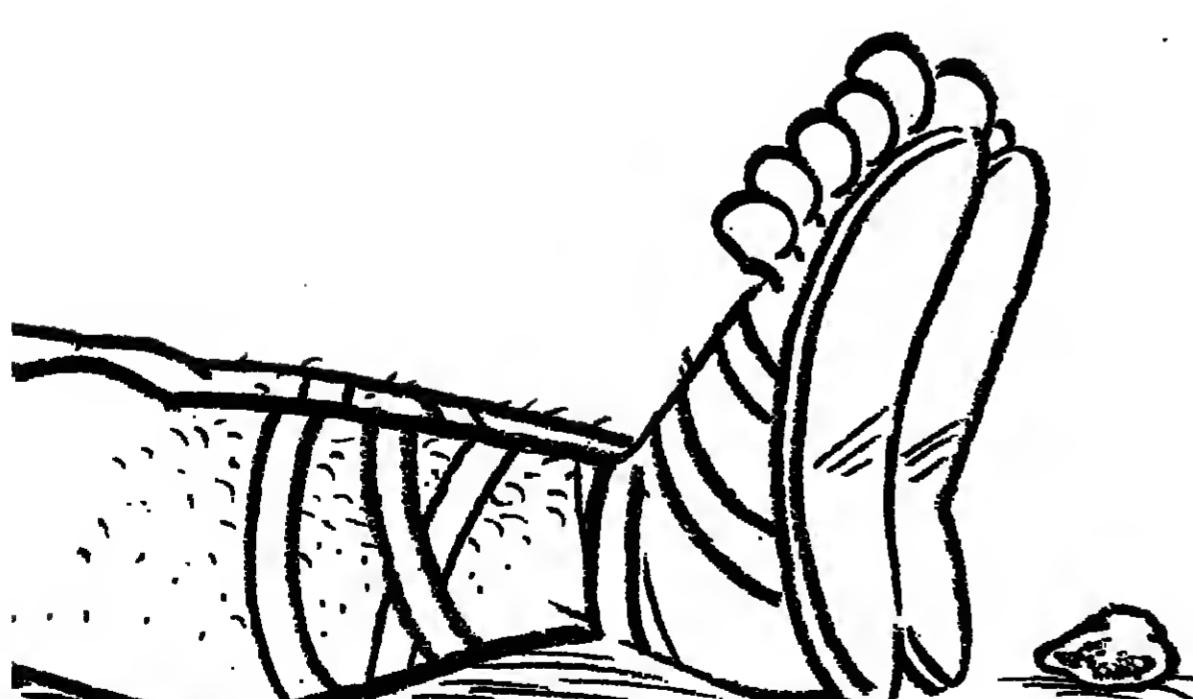
SNA stood in the way of users wanting to achieve hardware independence, he said, but IBM was listening to its customers and had now recognised the strength of feeling for open systems.

SNA will continue to have a wider range of supporting products than OSI for a number of years. That can change when IBM wants it to. SNA's share of the networks market will probably fall slowly through the 1990s, as SNA matures and as users downsize to smaller machines.

Nevertheless, "any thoughts of its decease are certainly premature," says Mr Williamson.

George Black

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we're more Open minded

DIGITAL promised to move its Decnet proprietary network to an open systems environment about two years ago and finally delivered the goods this summer.

Mr Keith Baker, the company's open networks marketing manager, admits it is around a year later than had been hoped, but says it was thought more important to ensure that the product did everything required than to meet a target date for completion.

Decnet now supports both the International Standards Organisation's Open Systems Interconnection (OSI) and the US Department of Defense's TCP/IP (Transmission Control Protocol/Internet Protocol).

The scope of the system has helped to dispel some of the cynicism that tends to accumulate in the computer industry

The market grew so fast that it became hard for even the leaders to keep up

whenever announced products do not materialise on time.

Digital Networking Architecture, as Decnet was originally called, is now installed in an estimated 100,000 sites worldwide, amounting to some 4.5m end-users.

It began life in 1975 – soon after IBM's Systems Network Architecture (SNA) – in similarly humble circumstances. Having first been developed by the company for its own use to link its PDP-11 minicomputers

'Proprietary systems are not a scenario for survival any more'

Digital opens up its Decnet network

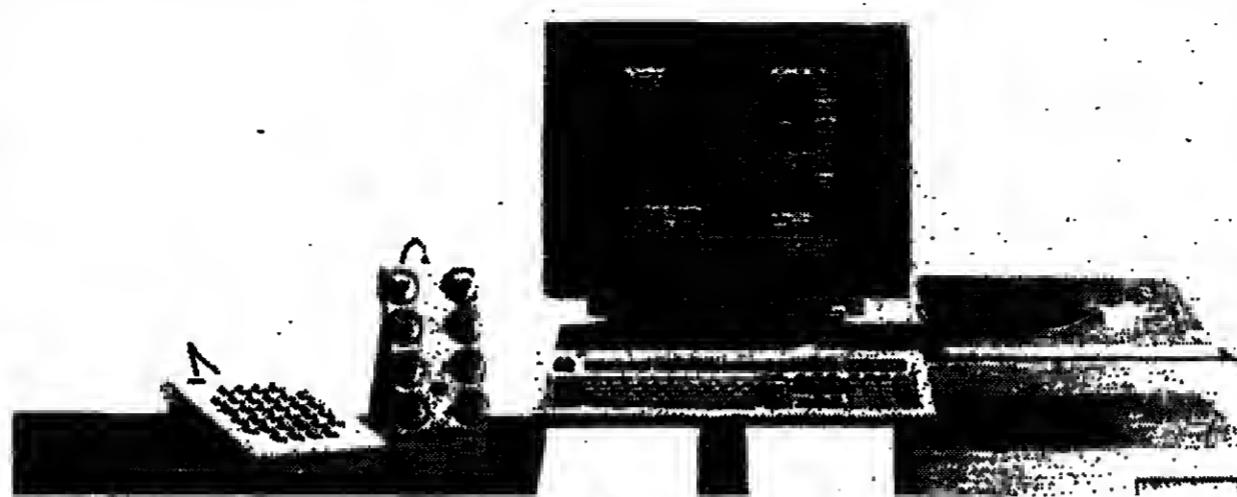
and other proprietary equipment, the Decnet Phase I product was unsophisticated, handling only file transfers within small networks.

The 1976, Phase II version replaced file copying by remote access to files and a basic form of network management. By 1980, when Phase III was introduced, local area networking had been expanded to wide area networking with communications across the public phone system.

As users began to look for communications between various makes of machine, Digital responded in 1982 with a Phase IV Decnet, incorporating Xerox's Ethernet standards and limited compatibility with IBM's SNA.

Between Decnet Phases IV and V there was a much longer gap, eventually amounting to nine years. This was mainly because the market grew so fast and became so complicated by the number of new vendors, products and standards that it became hard for even the leaders to keep up with all the changes.

This complexity drove Digital, along with others, towards OSI in 1988; it announced a programme for achieving full OSI compliance, hoping to carry it in six to nine months.



The IBM Risc System/8000 Powerstation 730 demonstrating Catta

restricted.

When Digital became aware that the Unix bandwidth was at last rolling, major changes to Decnet Phase V became necessary.

Whereas Unix has become universally accepted in the past couple of years, the same is not true of OSI, Mr Baker notes. "The take-up of OSI has been slower than was foreseen both because vendors have had trouble in creating the products and because users have

found the transition harder to undertake than they anticipated.

"They recognise that they must move to OSI but the problem is how," says Mr Baker.

Meanwhile, Decnet has now reached almost its ultimate stage of development, in his view. "The kitbag of standards is now almost full, unless this is invalidated by some completely new technology," he says.

Opinion is still divided on how wholehearted Digital's conversion to open systems is.

Many in the industry believe it is more willing than IBM to drop its proprietary products in favour of those open ones now wanted by a fast-growing number of users.

On the surface, its switch from a proprietary to an OSI-compliant Decnet, as from proprietary operating systems to network management standard which is generally thought a weak spot in OSI.

It has also joined the Office Document Architecture (ODA) consortium, which is trying to develop the OSI standard for document exchange between different systems.

However, Mr Andrew Mandala, research director of consultant Yankelovitz Group Europe, suggests that although Digital's direction is clear, its speed of movement may not be as

George Black

THE US INITIATIVE

Protocol that should survive

TRANSMITTING DATA from computer to computer requires agreed standards, referred to in the communications world as protocols. Communications protocols lurk in the depths of computer hardware, and by their very nature the end-user should not need to address them directly.

To tackle the order of battle in the protocol war, you must first brace yourself for a barrage of initials. But it does help to understand that protocols are governed by the same rules as the rest of the IT industry: namely, that scientific measurements are hard or impossible to come by, and behind every technical observation lurks a good old-fashioned personal opinion.

In 1978 the US Defense Advanced Research Projects Agency (Darpa) launched a plan to beef up computer links between research establishments and universities across the US. Darpa enjoys a mixed reputation among the US scientific community. Riding high on the defence spending boom of the 1980s it dedicated millions of dollars to the Darpa-car, a six-legged anthropomorphic jeep of latticed steel that jogged around the Darpa parking lot to no great end and broke down frequently.

With computer communications Darpa was on firmer ground. It had already established the Internet computer network in the mid-1970s. Pentagon funding and a heavy political hand across US technology R&D ensured that Darpa's vision of communications protocols prevailed. By 1983 the vast US academic computing community had adopted Darpa's Transport Control Protocol/Internet Protocol (TCP/IP) wholesale.

Darpa sponsorship accelerated TCP/IP through the standards bureaucracy. This formidable backing enabled the TCP/IP community to arrive at a definitive version. Settling in on US campus, TCP/IP became inextricably with the Unix operating system. As Unix shed its laboratory coat image and entered the commercial arena, TCP/IP arrived in its wake.

Manufacturers Unisys and Hewlett-Packard wrote TCP/IP links into their hardware and software offerings. And with a huge worldwide user base the protocol acquired a loyal following. The standard became as familiar upon the early around TCP/IP whenever Open Systems Interconnection (OSI), the EC-endorsed international protocol, rears its head.

"TCP/IP is efficient and pervasive and most vendors support it. Anybody who uses OSI today is really only doing so because of government constraints. OSI itself is staggeringly complex," says Mr Cliff Wilson, a telecoms executive at management consultants KPMG. Its internal network employs TCP/IP to keep Macintosh and IBM PCs and Digital Equipment and Prime mini-computers in constant communication. He says that TCP/IP is deeper than OSI by a factor of three or four.

It is a good, straightforward common denominator between disparate computer systems according to Mr Wilson. Unfortunately, this is exactly what people say about OSI. Mr Dermot Dwyer, of the National Computing Centre's open systems group, talks of horses for courses. "What makes TCP/IP worthwhile is what runs

over it. The Simple Mail Transport Protocol (SMTP) is a perfectly good electronic mail system for a Unix environment."

Mr Dwyer does not accept that all TCP/IP based systems are instantly compatible. He thinks that political support should make OSI's triumph inevitable. The government's Central Computing and Telecommunications Authority (CCTA) has just issued a four-stage guide for public sector computer sites shifting from TCP/IP to OSI. The migration is intended to be a painless exercise that installs full OSI compliance by 1993.

The two cost centres for transition are the purchase of OSI communications software (not too steep) and the inevitable consultants' fees (systems consultancy will make a tidy sum).

The CCTA can exert pressure on public sector computing. But there is no pressing influence on commercial users. TCP/IP does not demand rare and expensive skills as its academic foundation guarantees a regular supply of experienced graduates. Sun Microsystems has enjoyed phenomenal worldwide sales with its range of Unix workstations. Local networks of Sun machines are governed by the Network File System (NFS). This is a piece of software sold by Sun but written around TCP/IP. Sun users are not about to convert to OSI *en masse*.

"There is a lot of interest in OSI, but they're not rushing out to buy it," says Mr Jonathan Mills, Sun's UK desktop product marketing manager.

"TCP does all the work they need doing at the moment."

Mr Mark Hollister, network marketing manager for Hewlett-Packard in the UK, says his company has long had an association with TCP/IP because "it's practical and a relatively simple way of controlling and monitoring information from different devices."

These benefits may come to be appreciated by beleaguered motorists on the M25. As part of a £25m Department of Transport scheme to provide more information on traffic conditions, police control offices for the motorway are being linked to electronic road signs via a Hewlett-Packard computer network. Two lines of text will be flashed up on digital displays giving drivers an alternative "A" road route for drivers facing queues. After all, the official thinking goes, OSI, the high-profile star of the project is relying on TCP/IP signalling.

Mr Paul Negus, a DoT consultant from systems house ICL, explains that by choosing TCP/IP the DoT kept its future options open. "It's a protocol for any machine on the market." The DoT is not bound to stay with Hewlett-Packard, and this flexibility is what the open systems debate is all about.

If government standards can't override the technical judgement of the DoT, then TCP/IP is guaranteed a long lease of life. The list of OSI programmes and tools will grow, rendering that protocol irrelevant.

Bridge building, OSI and TCP/IP will develop. Depending on your allegiances, this entails OSI either embracing or absorbing TCP/IP. The experience of hardware suppliers and the loyalty of its fans suggests that the protocol from Darpa will be around for a long time to come.

Michael Dempsey

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THE WAY FORWARD IS OPEN

ICL

NETWORKING AND OPEN SYSTEMS 4

Louise Kehoe looks at software standards

Truce to boost sales ends Unix wars

THREE years after the industry erupted in battles over software standards for open systems, computer makers remain deeply divided, but hostilities have been suspended. Rival groups supporting alternative versions of the Unix operating system are stressing the similarity of their efforts, rather than squabbling over differences.

Slow sales growth in most markets has forced computer manufacturers to refocus their energies on efforts to boost sales. In the process, the industry has recognised that users are tired of the industry infighting, which has created widespread confusion rather than making it easier to hook different types of computers together.

"There is no question that perceived or real problems over different approaches to open systems have stalled sales," acknowledges Mr Peter Cunningham, president and chief executive of Unix International, an industry standards group formed three years ago by AT&T and Sun Microsystems which now has 245 members.

The key word now is "harmonisation", Mr Cunningham maintains. The unification of multiple conflicting approaches to open systems is

essential if the open systems movement is to continue its momentum, and "take out" proprietary systems, he says.

It appears highly unlikely, however, that computer makers will ever settle on a single "standard" version of Unix, the AT&T operating system that has been at the centre of the industry squabbles.

Unix International has endorsed AT&T's latest version of Unix, called Unix System V Release 4, while the rival Open Software Foundation, the founder members of which include International Business Machines, Digital Equipment and Hewlett-Packard, last year launched its own version of Unix, called OSF/1.

In spite of this schism, significant progress is being made toward creating standards that will enable different types of computers to work together efficiently and share applications software. In a landmark event for the open systems movement, OSF recently announced availability of its

Distributed Computing Environment, a new layer of system software that enables different types of computers running different operating systems, including proprietary software, to inter-operate.

DCE will preserve existing investments in computer hardware, software and networks, and make future product and technology purchases more valuable, says Mr David Tory, OSF president and chief executive.

Unix International is also moving forward. Recently the group announced plans to develop a framework of specifications for open systems, which it calls "UI-Atlas".

UI-Atlas expands the scope of open systems software far beyond the Unix operating system to encompass a broad set of system functions ranging from transaction processing to systems management and the graphical user interface.

"UI members recognise it was essential to build function-

ality on top of Unix if open systems were to continue to grow and knock out proprietary systems," explains Mr Peter Cunningham, of Unix International. By defining "reference technologies" and developing standard interfaces to link them, UI will specify how a broad range of computer products can be incorporated into an open system environment.

By outlining its plans, Unix is attempting to resolve disputes over competing "standards" that have split the computer industry into duelling factions in the past three years.

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ment, while leaving it up to computer manufacturers and software developers to create competing yet compatible products.

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Addressing a fundamental concern among computer manufacturers, UI plans to define interface specifications that give competing companies scope to design their own implementations of open systems, and differentiate them from those of competitors in the open systems market, thus avoiding the "commodification" of their products. By outlining its plans, UI is also attempting to resolve some of the disputes over competing "standards" that have split the computer industry into duelling factions over the past three years.

The industry group has endorsed a set of "reference technologies" that will form the basis of its UI-Atlas framework.

These will become available over the next two to three years and will include technologies developed by several UI members and non-members that cover all aspects of interoperability and application portability.

In a shift of emphasis that

resolves one of the wide differences of opinion over open systems, UI has also acknowledged that existing proprietary system software technologies must be integrated with open systems to protect the value of the vast installed base of proprietary systems.

For all of the excitement generated by open systems, computers running variants of the Unix operating system still account for only about 15 per cent of the world computer market.

Momentum behind the trend toward open systems is, however, growing. IBM, long viewed as the fortress of proprietary systems, recently

ware standards, and Unisys, which bases its product strategy on the open concept.

Hewlett-Packard has made a broad commitment to Unix and open systems, while Data General has created a line of open systems products with which it aims to restore itself to financial health.

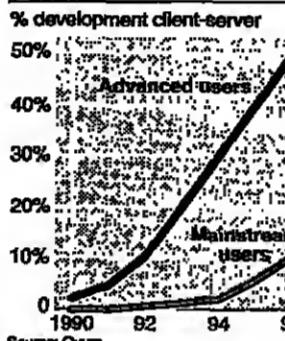
NCR, recently acquired by AT&T, is also a leading open systems advocate along with Sun Microsystems, the workstation market leader. Even Apple Computer, a company built on the superiority of its proprietary systems, has bowed to the inevitability. Through its recently signed agreements with IBM, Apple will adopt a version of Unix and attempt to transform its popular graphical user interface into an industry standard by licensing it to other computer makers.

Indeed, the computer company that lacks an open systems strategy is today the exception, rather than the rule. The "Unix wars" may be over, but new standards battles will inevitably arise as more companies crowd into the open systems arena and struggle to find the best solutions to the complex problems of making networks of heterogeneous computers behave like homogeneous systems.

CLIENT-SERVER COMPUTING

The promise of paradise

Uptake of client-server systems



found by many end-users to be too unwieldy, too unsympathetic to novices, often requiring extensive training and familiarisation.

On the other hand, they kept the user within the corporate fold: the data that users handled was up-to-date, valid and strictly controlled by the data processing department in its role as guardian of the corporate information store.

The PC offered independence to such users at what seemed a low price. Spreadsheet tools such as Lotus 1-2-3 offered ease of use, accessibility and a highly personal base of data.

Specific PC database tools,

such as dBase, Foxpro, Clipper, and others took the principle further.

Users were able to build up a highly personal collection of data, some of it copied and augmented from corporate records held elsewhere. The PC or workstation has a user-

friendly face, often with "windows" and simple graphics tools.

But there are disadvantages in PCs which the client-server approach could overcome. Mr Robin Bloor, of consultancy Butler Bloor, sees the PC as a personal tool with not enough processing power to cope with all the demands made upon it.

"The PC starts as an enabler, then becomes a constraint, the main problem being one of fragmentation," he says. "But soon people will start producing tools to manage software for the whole network, so that they can build corporate bridges. Only then will it be possible to build your applications on a PC without sacrificing performance."

The evolution of GUIs -

Graphical User Interfaces -

brings another vital element to

the appeal of the client-server solution, since GUIs provide a

friendly environment, and

a "gateway" to other processes.

GUIs are part of the movement toward a more liberal environment: one demanded by users.

"We've trained something in

the region of 3,500 people this

year, about 1,500 of them on PC

databases, using various PC

hosts," says Mr Brian Webb,

business development manager

of Surrey-based training spe-

cialist Complex.

The catch is that little has been written with

client-server architecture in

mind. PC database suppliers

are among the first to take

advantage of SQL, the

language of database, to link

their PC tools to their big brothers

on the mainframe such as

IBM's DB2. Little other applica-

tions software exists.

Mr Frank Dodge is the

founder and former president of

mainframe accounting soft-

ware vendor McCormack and

Dodge, now Dun & Bradstreet Software. His newly formed Dodge Group intends to provide accounting applications

on what he calls co-operative processing environment. "The term client-server has been abused, and is getting muddled like other software terms. We are light years away from the ideal model as yet, and to implement it, software has to be totally redesigned and redeveloped from scratch. You cannot get the benefit of client-server merely by putting a server merely by putting a graphical user interface in front of old technology that stays on the mainframe."

Users, he says, need to devolve as much control from the mainframe as possible - applications and databases ought to be delivered to the network on a server. But this means writing extra controls and messaging into the applications. Mr Dodge warns that this will delay the promised land of client-server.

"All of the current software companies and hardware companies like IBM and DEC have vested interests in keeping the software on the mainframe where possible," he says.

Claire Gooding

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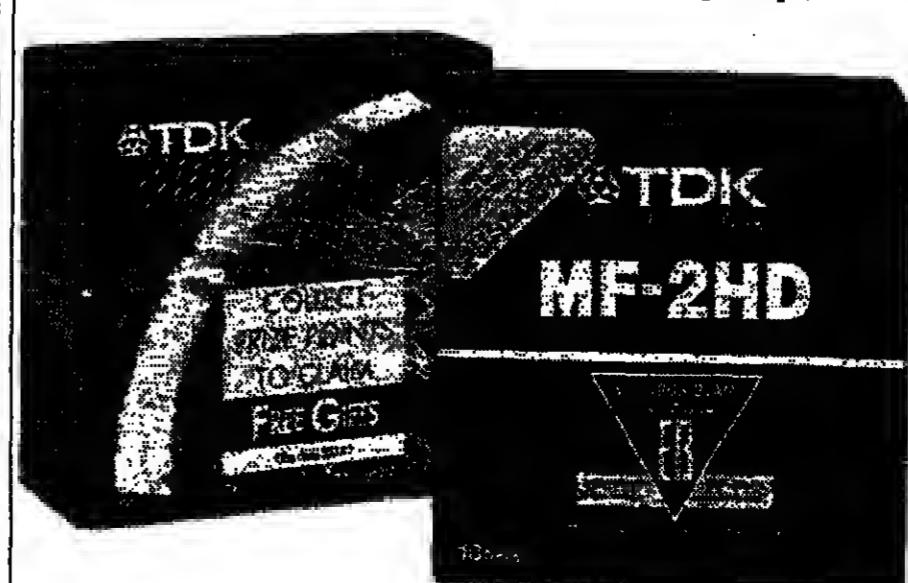
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NETWORKING AND OPEN SYSTEMS 6

Profile: HEWLETT-PACKARD

It pays to take a Risc

FIFTY-TWO years ago, Dave Packard and Bill Hewlett formed a company in the US to manufacture a resistance-capacitor audio oscillator for testing sound equipment.

Today, Hewlett-Packard heads into the 1990s as a force to be reckoned with in its specialised field as an international manufacturer of measurement and computation products and systems used in industry, business, engineering, science, medicine and education, in approximately 100 countries. It employs more than 81,000 people worldwide and had a revenue of \$13.2bn in its 1990 fiscal year.

Clearly, Hewlett-Packard has enjoyed a sound business plan over the years to survive the rough and tumble of the international information technology industry. Its secret lies in its ability to foresee trends and react quickly.

It was ahead of its rivals in identifying two key trends driving the computer marketplace today. First, the move to standards-based open systems and software, where all makes of equipment work together. Second, the growth of distributed client-server computing in which desktop computers or "clients" are the window into a diverse, integrated network of general-purpose minicomputers, mainframes and specialised servers.

Hewlett-Packard believes that these trends have emerged because many organisations are suffering what it describes as an architectural crisis characterised by product proliferation, technical incompatibility and wasted data.

The company's answer to the problem is an open systems commitment in its broad range of personal computers, workstations, servers and desktop peripherals. Its early commitment to the development of reduced instruction set com-

puting (Risc) architecture, where the speed at which the processors can execute instructions is increased, enhanced its success. Hewlett-Packard spent \$1bn changing its whole system range to this technology at a time when even International Business Machines, the world's largest computer manufacturer, was avoiding Risc.

Hewlett-Packard plays a leadership role in forging industry standards that define the interfaces between different hardware and software elements, so creating open systems. It is a committed supporter of the Open Software Foundation (OSF), an international group of companies which have merged their tech-

nologies to create open systems standards for others to follow.

In 1989, the OSF adopted the graphical user interface Motif, which has Hewlett-Packard components and provides users with a standard way to access information. It competes against Unix International's Open Look package from Sun Microsystems.

Last year, the OSF chose Hewlett-Packard networking technologies as components of its distributed computing environment, which enables users to access company-wide information from their own desktop systems. For example, marketing managers can access information worldwide with software they buy off the shelf.

They can write a report in ink and get information from Tokyo on manufacturing production schedules and from Chicago on engineering designs. They can also assem-

ble financial results from business units in North America, Europe and the Pacific Rim. The European Commission has endorsed the distributed computing environment.

Last month, the OSF as the standards organisation selected three Hewlett-Packard products to form the core of its distributed management environment, which allows users with a wide-area computer network to handle problems from one location.

Hewlett-Packard has also expanded its relationship with Hitachi by licensing Hitachi to make and sell microcomputers based on HP's PA-Risc architecture. And Oki Industry of Japan has teamed up with Hewlett-Packard to build jointly and operate a printed-circuit board manufacturing facility in Puerto Rico.

With the political clout of a standards organisation behind it, and midrange computing systems in good grid positions in the Unix operating systems race, Hewlett-Packard looks set further to consolidate its position in the open systems markets of the future.

Or, rather, keeps him quiet until the supplier is ready to sell in the next box of tricks the lab has dreamt up.

Yet the crucial fact about open systems is that the computer industry has not embraced open systems because it wanted to. It was forced down this path by a user revolt against proprietary systems locking them in to one supplier. And once users gain the right to make a painless switch of hardware vendor, they will exercise that right.

Olivetti is proud of its open systems heritage. It made a commitment to open systems in 1987, and four years is a long time in the computer industry.

Open Systems Architecture (OSA) is the framework for Olivetti's offering in the field. OSA embraces standardised hardware and software quality to improve software quality and productivity.

NewWave has spawned the concept of NewWave Computing. Hewlett-Packard's open systems vision for the future.

The aim is to link a variety of computers in a network so they can operate as one. The approach is based on open systems and advanced software technology so that users can build on computing resources they already have.

Users are helped in their

task in being able to draw on more than 4,500 third party solution providers who round out Hewlett-Packard's own offerings. Workstation deals include Mentor Graphics at \$400m, US West at \$25m, NTT at \$30m and Nissan at \$13m.

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Users are helped in their

Profile: OLIVETTI

A veteran after four years

Olivetti has stamped its mark on OSA in the marketing of industry sector packages. Branded as application profiles, these assortments of technology have been selected to address customers' needs across industry.

IBsys, a wide-ranging portfolio of office systems, includes integration of Microsoft's phenomenally successful Windows operating system. Olivetti has made substantial inroads into the banking and finance market on the back of personal banking (PB), which governs a bewildering array of products. The point is to take that confusion out of the bank's agenda. Olivetti angles for contracts that embrace the

long-term management of technology.

The OSA factor means integrating products from dominant suppliers in the market. The selling proposition for Olivetti's sales teams is their willingness to undertake a very detailed study of the business sector in question. Olivetti's success in winning finance sector contracts suggests that it has found a way to implement OSA as a part of the client's end product.

Barclays Bank has farmed out its branch equipment maintenance to Olivetti. The £50m three-year contract relieves Barclays of a technical headache.

Profile: SUN MICROSYSTEMS

An open architecture route to fame

SUN MICROSYSTEMS, the multi-national, billion-dollar US corporation, is one of the main standard bearers of open systems.

Sun (the Stanford University Network) was founded in 1982 and now commands the largest worldwide share of the computer industry's fastest-growing market segment, workstations and servers, according to market research firm International Data Corporation.

In the 1990s, it is predicted, such technology will overtake the traditional computing infrastructure of networked personal computers and proprietary, time-sharing minicomputers. Sun reckons its workstation and server philosophy is the fourth wave in the history of computing, the other three being the development of mainframes, minicomputers and personal computers. Certainly, the growing number of corporate disciples of Sun and its computing strategy adds weight to its claim.

Sun's rise to fame has been on the back of the basic belief that computer users are tired of being locked into buying expensive, proprietary computer systems from one vendor. Such systems are traditionally incompatible with rival systems, forcing computer users to be faithful to one product range, irrespective of need, purely to protect substantial investments in information technology.

Sun set out to give users more buying power by developing a range of products based on an open architecture designed to unite all types of hardware and software. It centred its development around the Unix operating system which runs the inner workings of a computer, being the intermediary between the application software and the computer. Unix is a system that has rapidly gained worldwide acceptance as a standard for both technical and commercial

applications.

But in those early days there were several different versions of Unix, none of which was truly geared towards open systems. This limited the sales volume that Sun craved to dominate the blossoming open systems field, and so it teamed up with Unix's creator, AT&T, the telecommunications group, to develop a more open version of the operating system Unix V.4.

Sun quickly became the mid-range company to watch as it in effect legitimised Unix in the broader commercial marketplace. Striding ahead of its more

Many more licensees prefer to be anonymous

reticent and less well connected competitors, Sun sealed its long-term strategy in 1989. In that year, Sun dumped its two key microprocessor chip suppliers, Motorola and Intel, and started work on an advanced type of desktop machine built around a new, super-fast architecture called Risc. The Motorola and Intel chip processors (the engine of the workstation) were replaced with a chip designed by Sun and called Sparc.

The determination by Sun to achieve truly open computing, even if it meant redesigning the microchip, has laid the company open to accusations of proprietary intentions every bit as selfish as those of its contemporaries. However, Sun lost no time in marketing its Sparc hardware and software compatibility. Clone makers and software developers were quick to recognise the potential of Sun's open systems product strategy, and they provided the industry-wide investment and commitment that

Sun desired.

Today, Sun has collaborative technology deals on Sparc-based systems with some of the largest industrial corporations in the world, including Fujitsu, Amdahl, International Computers (ICL) and Xerox Corporation. Many more organisations prefer to remain anonymous.

Still, Sparc International, a consortium of 130 vendors using the technology, believes that we are only in the infancy of the Sun-compatible or Sparc-like industry. It estimates that the number of Sparc-based systems sold will increase from 250,000 today to over 1m in 1993.

Many software companies have jumped on Sun's Risc bandwagon and there are over 2,000 software applications - Sparcware - available that operate on Sun's systems. Sun's own software subsidiary, Sunsoft, formed earlier this year, has shown them the way.

The expanding base of commercial Unix and personal productivity software has helped make Sun's hardware even more attractive to corporate purchasers. Notable orders include those from Northwest Airlines, New Zealand's Inland Revenue and Mitsubishi Bank.

Sun has complemented its Sparc microprocessor architecture and Unix operating system platform with its Open Look graphical user interface and Open Network Computing environment. Open Look allows users to work with ease across different kinds of computer equipment, including systems from organisations such as Digital Equipment Corporation, Hewlett-Packard and International Business

Machines and also allows access to a range of network resources.

Advanced networking products and services complete Sun's open systems focus.

Sun's ultimate goal is to leave its mark on the 1990s in the way that personal computers dominated the 1980s. It wants to empower workgroups with its workstations and servers in the way that personal computers empower the individual.

Sun is confident of its lead over its rivals because others have to support multiple product lines, architectures and even multiple operating systems. Its single computing architecture is a simplified

version of the VME.

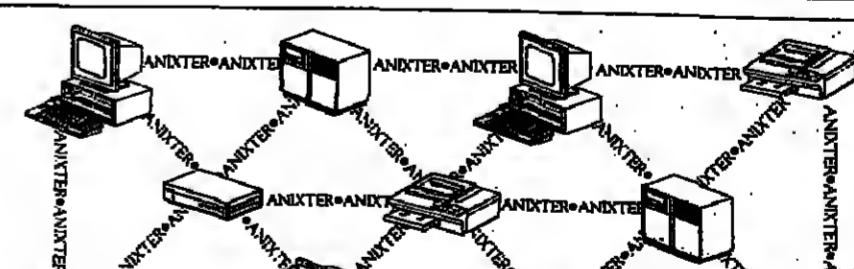
Continued on Page 7

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NETWORKING AND OPEN SYSTEMS 7

Phil Manchester looks at the prospects for object-oriented technology

Last rites for esoteric 'priesthood'?

AT THE end of this month, what could be the last technological priesthood of the computer industry will meet in London to lecture on and discuss the esoteric subject of object-oriented technology.

The seminars and the conference in object-oriented programming (Scoop) has lined up a Who's Who of the object-oriented technology world to explain what it is and to discuss its implications for the future of computer systems.

The reason that this group of worthy academics and industry researchers could be the last esoteric 'priesthood' in the computer industry is simple. One of the main aims of the object-oriented approach is to make computers more accessible to non-technologists, eliminating the need for armies of experts to operate and program them.

Object-oriented technology provides a framework for pre-defined software components or objects which can be used by end-users to build their own applications. If the protagonists of object-oriented technologies are successful, it could make technology priesthoods unnecessary.

This possibility is reflected in the title of programming expert Michael Jackson's Scoop paper, "Object Orientation: The Last One?" Mr Jackson, a pioneer of software engineering methods, discusses whether object-oriented design might be the final stage in the evolution of software development.

By defining the behaviour and the interfaces to software components, object-oriented systems aims to bring an ordered, engineering approach to system development.

This should make it easier for application users to construct their own systems in a similar way to building "Lego" models – although it is still early days for the concept and users are only just beginning to become interested.

The computer industry is, however, taking object-oriented technology very seriously. Scoop takes place against a background of furious activity by computer manufacturers and software developers to take object-oriented

face for personal computers. And leading software developers Microsoft, Borland and Oracle have pledged themselves to developing their future products with the object-oriented approach.

The Object Management Group (OMG), a US-based industry group set up in April 1989 to promote object-oriented technology, has seen a massive growth in its membership in the past year. A year ago OMG claimed 80 members, now there are 170 OMG members and the number continues to rise.

Microsoft and IBM, both of which had delayed membership, joined early in the year. Significantly, large organisations are taking notice. Mr Christopher Stone, president of OMG, says that he is currently talking to Uniliver, Boeing, Dupont, John Deere and American Airlines among others. He expects them all to be signed up as members by the end of the year.

Object orientation is now big time and the leading-edge users can start to apply pressure to their suppliers to conform to standards," says Mr Stone. The rapid growth of OMG's membership is important because OMG fulfills the role of co-ordinator for different companies' efforts to develop object-oriented technology. It has defined a framework and a set of standards which have been widely adopted.

It has also started to put flesh on the bones with products. At the end of this month, the so-called object-re-

quest broker (ORB), the central systems software component to handle communications between objects, will be unveiled at Unix Expo in the US. This will provide a base for future development of object-oriented systems.

Mr Stone emphasises the importance of the wide acceptance of object-oriented standards. "Without consensus, it will not work. We must have agreement on how objects will talk to each other or we will lose the benefits," he says.

He has had some success in promoting compromise and co-operation between OMG members. The technology to build the ORB was derived from competing bids from

To construct one's own system should be like building a 'Lego' model

Technology on board and bring its undoubted benefits to end-users.

The recent unprecedented co-operative agreement between IBM, the world's biggest computer company, and Apple, its major rival in the personal computer market, is an example. It aims to create a new breed of high-performance, object-oriented workstation by the mid-1990s.

Bellwett-Packard, the mini-computer manufacturer, has moved into the general software market with its NewWave object-oriented inter-

face for personal computers.

of the first companies that has already taken on many of the radical ideas of object-oriented technology in its range of high-performance workstations. Mr Strong claims that Next is about two years ahead of IBM and Apple.

The IBM/Apple announcement has verified the position we took three years ago and it helps a lot to have them define the market for us," says Mr Stroog. He recognises, however, that users are unlikely to be fooled by empty promises and that object-oriented technology must deliver. It must be able to offer something to users which make it worth paying the price of migration to the new technology.

"It really is a new concept in building end-user software. But we need tools to make it easier. There is a danger that object-oriented technology will raise users' expectations and then see them disappointed."

He points to examples of desktop publishing: "DTP caused problems because it gave anyone the power to be a designer – but you still need the design training to make it work properly."

"The tools to exploit object-oriented technology – like our own Nextstep – are becoming available. They will cause users to start forcing the pace in about a year's time," Mr Stroog says. Meanwhile, the software priesthood will continue to push the technology as a panacea to the problems of software development – despite the long-term implications for its survival.

GRAPHICAL USER INTERFACES

Big stride ahead

POWERFUL modern computers offer more than fast processing and bigger storage capacity. They have also caused a revolution in the way computers are used. More and more of a computer's power is dedicated to making life easier for the user. The greatest stride forward in the last year has been the wide acceptance of graphical user interfaces (GUIs).

Pioneered by Xerox in the early 1980s and popularised by Apple with its Macintosh, the GUI has totally changed the way many use computers and helped them to gain more direct benefit from their systems. GUIs represent programs and data files on a display screen which makes them easier to understand and use. Combined with high-resolution screens and mouse pointers, GUIs have opened up new opportunities for application builders and attracted many new users in computing.

The final seal of approval in the last year has been the success of Microsoft's Windows 3.1 for the standard IBM-compatible personal computer (PC). It stormed to the top of the best-selling software charts and Microsoft claims it has sold 5m copies in the first 18 months. For less than £100, Windows 3 transforms the IBM PC into a full-blown workstation with a multi-colour, multiple window environment comparable to, if not quite as good as, the Apple Macintosh.

Software developers have rushed to support Windows 3 and all major suppliers now either have Windows versions on the shelves or are working hard to get them ready.

The GUI has also become a major issue in the battle between the various operating environments for the mid-range computer market – with each faction presenting its particular variation on the Macintosh/Windows theme.

The result is that all mainstream software product development is now, quite rightly, focused on GUIs as the primary interface between humans and computer systems. They make computers much easier to use and the introduction of consistent standards has made new software applications easier to come to

terms with.

While the appeal of the GUI is obvious in applications such as graphics design, desktop publishing and advanced word-processing, its application to the more mundane tasks associated with traditional data processing, such as accounting and manufacturing, has been slower.

But there are signs that this is changing. Database developers Oracle and Borland have shown strong commitment to GUIs for their future front-end tools developments. And leading accountancy software suppliers are also reacting to the market trend.

Sage, one of the UK's biggest accountancy software developers, has recently announced a version of its package with a GUI. And Sybix, an Australian company, has introduced an accountancy package based on Microsoft's Windows 3.

Mr John Tate, managing director of accountancy software specialists Tate-Bramall, sees this as a positive development for accountancy software users – despite doubts about the need for GUI in accountancy systems.

"Accountancy applications are heavily keyboard based because they involve entering lots of transaction data. But GUIs are no less relevant in accountancy than in any other applications and they can bring advantages. It is certainly one of the most topical issues," says Mr Tate.

While it sees no great advantage in GUIs for standard "workhorse" accounting, he thinks there is potential for it

in a wider context. "Features like cut-and-paste which GUIs offer would be useful in management information systems or for preparing a sales quote based on order information."

"I think there will be much more to come in this area. Sage's decision to pick it up is very interesting because it is the largest seller by module in the UK."

Accountancy is not the only established area of data processing where GUIs are having an impact. Management of large systems, particularly those based on networks – is an interesting processing problem for large organisations. Computer Associates (CA), the big software product supplier, sees the GUI as providing a flexible solution to systems management problems.

"GUIs are a de facto standard for all new product development in CA and we see it as more than making systems easier to use. Our heavy involvement with mainframe software shows that there is a strong trend away from surrounding computers with experts. Users want control and the GUI gives us a way to deliver it," says Mr Mike Mauder.

One of CA's main markets is for operational control software which allows mainframe resources to be used in the best way. Mr Mauder says that the company will provide a GUI extension to its system management products. Called Viewpoint, it is compatible with Windows 3 and will "help the move away from centralised mainframes to network environments".

CA, in line with most other suppliers to the PC market, is also bringing its PC products across to Windows 3. "We have announced Superproject this month and Supercale will follow in the next three months," says Mr Mauder.

As far as extending the GUI to end-user applications is concerned, Mr Mauder agrees with Mr Tate. "You don't need a GUI for debts and credits, but it is very useful when you want to know something. We see it as an information delivery vehicle. If it is nice and easy to use, more people will use it."

Phil Manchester

Open architecture route to fame

Continued from Page 6

technology that should enable it to retain a leading market share in the industry.

But while Sun's future looks assured – there has even been speculation that Fujitsu has an acquisitive eye on it – the company has its crosses to bear. It recently abandoned one of its US corporate marketing slogans, "the network is the computer" and tried to ignore jibes that it did so because the phrase implies rival X-terminal technology. (X-terminals combine the

power of a workstation with the compactness of a terminal). Turning the other cheek was rather tricky for Sun as it

X-terminal technology may have the potential to oust workstations

meant looking straight at its Mountain View neighbour, Network Computing Devices, which specialises in X-terminal technology and is reported to be trying to take out a copy-

right or the phrase. X-terminals are already beginning to compete with the workstation at the corporate level and IDC and Dataquest analysts predict that demand for them will jump from 51,000 units in 1990 to 758,000 in 1994.

Sun's strengths lie in the low-end workstation market and it is here that X-terminal technology is expected to bite. Some think that X-terminals have the potential to oust workstations from corporate IT strategies within five years. But with Sun's investment in

the high-end workstation and server markets, it is unlikely to be badly mauled.

Where Sun has perceived a threat to its domination of the open systems marketplace is in the continued thrust of Intel-based machines. Accordingly, Sun has shrewdly invested in Intel systems, and is currently bidding for the products division of Eastman Kodak's Unix software house, Interactive Systems. This California-based company sells one of the most popular versions of the Unix operating systems for Intel-based machines.

Sun. It bops to attract users moving to distributed client server networks, although it faces keen competition.

Lindsay Nicoll

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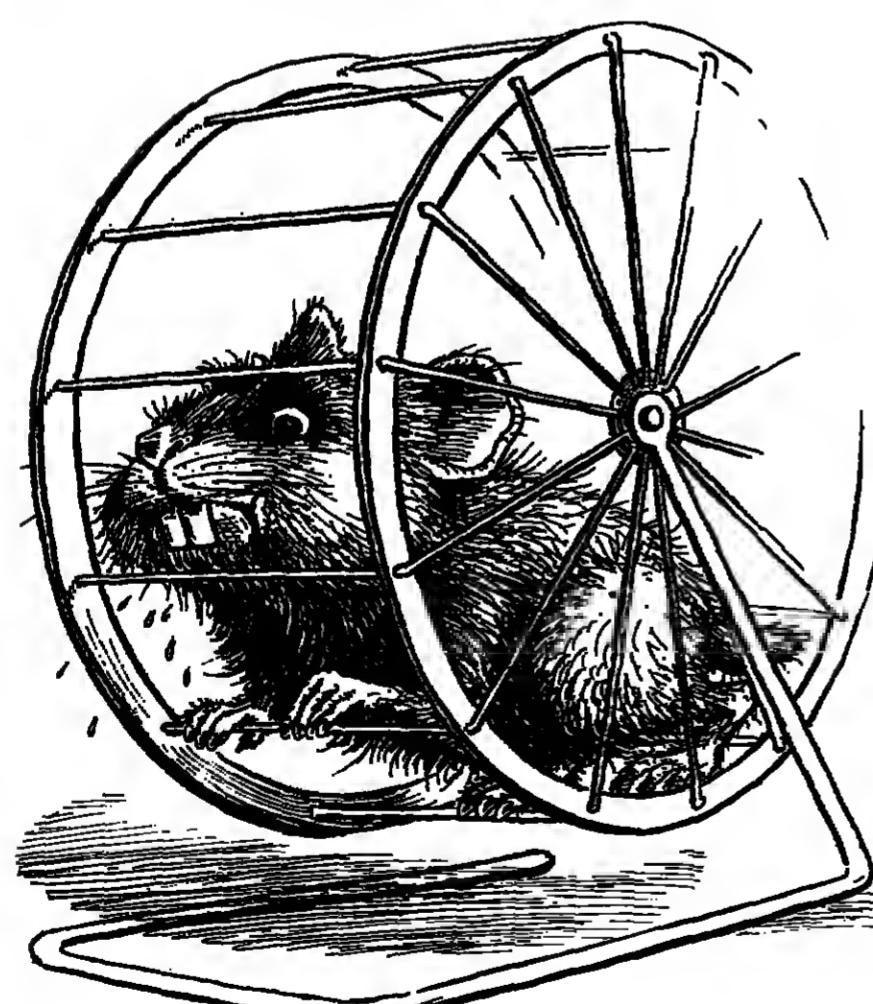
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NETWORKING AND OPEN SYSTEMS 9

INFORMATION TECHNOLOGY

Cost benefits seen by governments

GOVERNMENTS, with their huge expenditure on information technology, were among the first to understand the cost benefits that were implicit in open systems and client-server computing.

They built models for vendors and others to follow - the UK government's Gosp OSI profile, for example - and their policy of insisting on open systems in public procurement was instrumental in changing attitudes among manufacturers. They realised that valuable government orders would be denied them unless they could meet the contractual requirements.

These orders can be vast in scope. The UK subsidiary of Groupe Bull of France, for example, was last year awarded a £50m contract as prime contractor to computerise the offices of the Inland Revenue. According to Mr. Carol Wyett, Bull's project manager, the original intention in developing an Inland Revenue "office of the 1990s" was to provide greater resilience within the Revenue's existing computer network. Based on dumb terminals linked to mainframes, it left the staff with restricted means of carrying on with their work if the terminal broke or a line went down.

With the decision to move to open systems communications, however, the project took on a new flavour. By 1995, Bull should have installed 450 Unix servers and 25,000 workstations. It will be, it is thought, the largest Open Systems interconnection (OSI) network in the world.

The workstations are special in that they are based on Intel's 386 chip but are "diskless", a security measure which means that information cannot easily be removed from or put into the system. The system runs on the newly established Government Data Network.

Unisys, with its background in the universities, is not noted for its security features; the version Bull is providing for the Inland Revenue is "vanilla Unix with some added security" according to Ms. Wyett. Bull's own "Secure" version was thought to be overkill.

Security was a major consideration in another UK government project, the Ministry of Defence "Gbots" (corporate headquarters office technology system) project awarded earlier this month to a consortium of ICL, Hewlett-Packard, BICC,

Teleglobe & Labrand Bedouin and Data Logic.

The Gbots project costs more but is on a less grand scale than the Revenue initiative - it will involve about 10,000 terminals and several hundred Unix servers. The aim is to provide a streamlined communications system together with personal productivity tools for its users - word-processing, database, control and the long tail of documents and means of access to other systems.

Data Logic was responsible for the design of the system. It has to balance security, central and open processing. Thus, started on an open source mail and system, the final version will include the option enabling to prevent unauthorised access, encryption technology and temporary personal computers, protect against radio leakage which could be read by receivers outside the building.

Outsourcing government interest in client server applications is

The Ministry of Defence's Gbots project will involve 10,000 terminals

growing as companies look at ways of "downsizing" from traditional mainframe approaches, in favour of personal computers linked by local area networks.

CityBank in the UK, for example, has downsized many of its cash management and securities applications.

According to Mr. Jerzy Ruzlowski, CityBank cash management project manager, the advantages of client-server computing are already making themselves felt.

Cash management services are run on behalf of the bank's large corporate customers who use the bank as an intermediary as they move money from account to account to take advantage of interest rates differences and so on.

It is a service which used to generate a lot of telecommunications traffic and bales of paper. The mainframe based system has now been replaced by a series of personal computers using the IBM operating system OS/2 together with Microsoft Windows and connected together in a network by Local Area Network (LAN) Manager networking software. The bank was a pioneer of this (and indeed many other) computing technologies. Work on

NEITHER A Unix box nor a communications interface with an open system make.

That's the lesson that the world's major corporations are learning fast as they try to break out of their proprietary architectures and introduce widespread open systems.

"In the past, large customers have come to us to find out what open systems mean," explains Mr. Nick Cherrie, managing consultant of information technology at Price Waterhouse, London. "Now they are coming to us to ask how to do it. They have enormous amounts of data tied up in proprietary systems and they need to know how to coexist with existing systems, how to retain the value of what they have got, and to get the most out of the new world."

He says that the system gives better control than paper and needs less support than mainframe technology. The cash management department is now in effect self-sufficient in technology. Fewer members of staff are needed and there has been a decline in the number of claims resulting from errors in processing.

Northwest Airlines of the US, which merged with Republic Airlines in 1986, is another pioneer in the use of information technology.

It was an early customer for "intelligent" voice communications networks using an AT&T Megaco switch to balance traffic loads between reservation centres and provide a 24-hour service.

Now it is applying client-server techniques to its passenger revenue accounting system. Many airlines calculate revenues by a statistical technique depending on a sample of airline tickets (air coupons) and audio coupons from their travel agents. This is because of the huge daily volume of coupons.

Northwest wanted to audit all its coupons to get accurate revenue figures, check on the efficiency of its agents and get better data on its customers. The system it settled for included workstations, servers, artificial intelligence and image technology, scanning 170,000 coupons into the system daily at 17 a second. Local area and wide area networks are used to connect the host computers, specialised servers and workstations.

The company now claims more accurate revenue figures and improved customer service. The airline has genuinely achieved competitive advantage through innovative use of information technology.

Alan Cane

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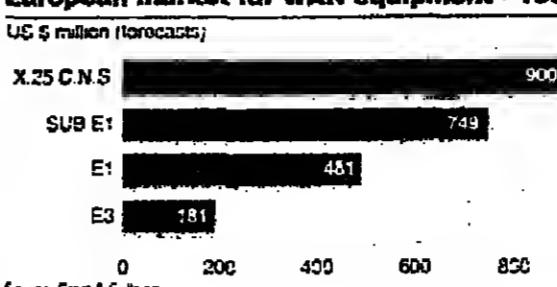
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OPEN INFORMATION ARCHITECTURE

Business and IT: closing the gap

European market for WAN equipment - 1995



whether what the location, or operating system or the type of database. It can provide Standard Query Language access across 45 different types of database on 35 operating systems, and supports networking protocols from IBM's SNA and Digital's Decnet, to Ethernet and Open Systems Interconnection.

In practice, that amounts to a PC user running a Lotus 1-2-3 spreadsheet and being able to access information stored on one of a company's IBM mainframes, or on a Digital machine, somewhere else, and

"At the moment information that decision-makers need is trapped in proprietary systems"

to merge that data into the Lotus application on his desktop.

"One of the biggest frustrations over the last two decades for customers has been an inability to harness all that enterprise-wide data and deliver it to the information workers who need it," says Mr. Ian Bramley, Information Builders' European marketing manager.

"It is sometimes locked in operational systems that have been built on successive layers of technology, or hidden in new desktop and personal computer networks."

That is a situation Shell has been trying to break out of for the past two years. The lack of adequate products on the market forced the company to create its own information architecture to cope with the duplication of data, the inconsistencies across the network and the large amounts of people and processing time it was

able to get at.

IBM estimates that at the moment only around 20 per cent of a company's information resides on a relational

database. The rest is in old file formats.

The information warehouse strategy recommends that most of the data needed for regular management information requests is kept at a central location and updated by the source systems at regular intervals.

This creates a consistent and easily accessible information resource for information seekers.

The information does not necessarily have to reside in the central location but Mr Cole believes that "bringing it together at the centre has many advantages because the tools we have there can add significant value to the data."

One of these advantages, of course, is that this approach will help IBM sell more central mainframe power.

Some open systems observers fear that this centralised information focus may ultimately create a "data dump" rather than a warehouse and deny some of the benefits that the decentralised power and performance of an open systems strategy allows.

Nevertheless, the attention and emphasis on the information resource and the tools that provide broad information access are a welcome step for the world's customers and the open systems movement.

"An open information architecture will give business instant access to valuable reservoirs of information around the enterprise," says X/Open's Mr Morris. "What we need are the open systems standards and the open-minded people who will be able to make this

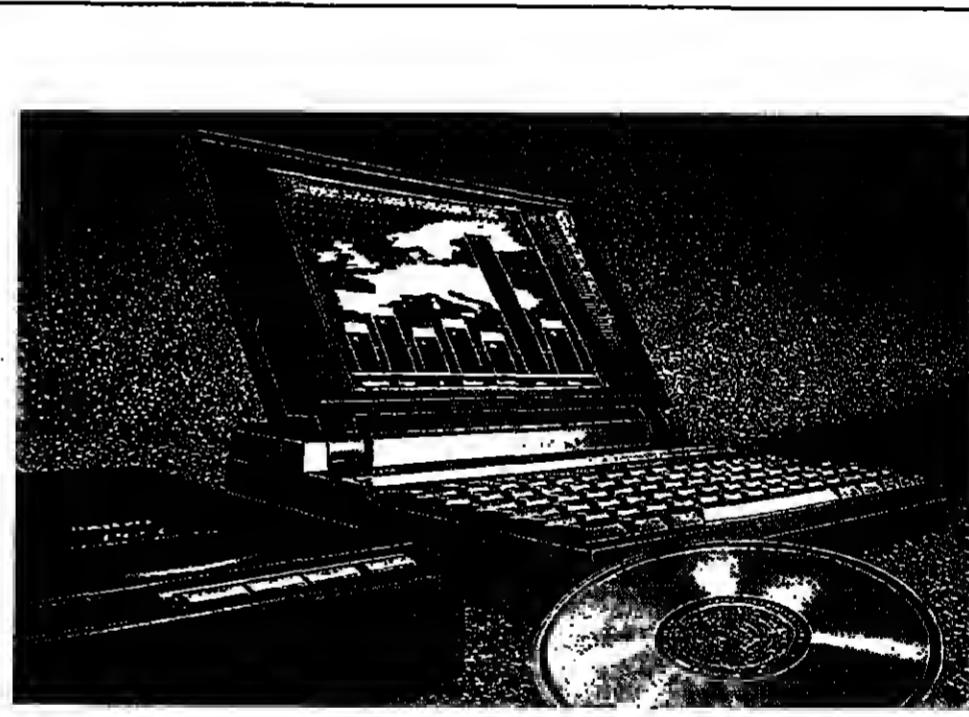
A consistent and easily accessible information resource for information seekers

happen. Ultimately, it is this open information architecture that will close the gap between the business and the information technology people. Then we will see the real benefits of the open systems movement.

Paul Tate



Bill Gates, chairman and chief executive of Microsoft, which is fighting tooth and nail to hold its foothold in the personal computer network operating system market



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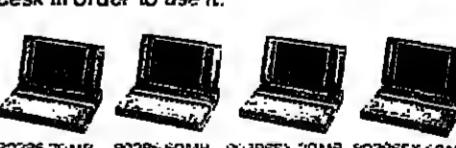
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NETWORKING AND OPEN SYSTEMS 10

Louise Kehoe on initiatives to unplug a 'software bottleneck'

Standards battle gets under way

THE VALUE of computer standards first emerged in the personal computer market in the early 1980s when dozens of manufacturers followed International Business Machines' lead, creating IBM-compatible personal computers, or 'clones'.

Because virtually all PC makers (with the exception of Apple Computer) adopted the same Intel microprocessors and Microsoft operating system as IBM, users were able to choose between dozens of competing suppliers of standard equipment.

A vast array of application programs quickly developed, stimulating computer sales. Computer buyers came to appreciate the advantages of standards through the proliferation of "shrink-wrapped" applications programs and competitive pricing for both hardware and software.

This spawned demands for "open systems" or the creation of standards spanning a much broader spectrum of computer types, centred on various derivatives of AT&T's Unix operating system.

Ironically, however, the standards that have so far emerged in the rest of the computer market are not compatible with the vast installed base of about 90m IBM-compatible PCs.

Three competing industry

initiatives aimed at creating industry standards that will encompass both the PC and higher performance computers have recently been launched:

■ The Ace initiative, lead by Compaq Computer, Digital Equipment, Microsoft and the Santa Cruz Operation, plans to create standards based on two hardware "platforms", the Intel microprocessor-based PC and the Mips Computer Risc (reduced instruction set computing) architecture. Ace is also backing two operating systems: a new operating system under development at Microsoft, called Windows New Technology, and a Unix-based operating system that will be developed by the Santa Cruz Operation.

■ Sun Microsystems recently launched a new operating system called Solaris, based on Unix, that will run both on Intel-based PCs and on computers built using Sun's Risc microprocessor, called Sparc.

■ IBM, Apple Computer and Motorola recently signed agreements to jointly develop hardware and software that has prevented computer users taking full advantage of advances in microprocessor technology.

The role of Intel's microprocessors as the "standard" for personal computing is also, however, challenged by the new initiatives. While Intel maintains that its technology will keep pace with developments in Risc microprocessors, the chip company will face

fierce competition in a market that it has dominated for the past decade.

These efforts to establish a new operating system standard also signal a shift in the role of the "personal computer". Individual PC users don't need all the features of a multi-user, multi-tasking operating system, such as Sun's Solaris or Microsoft's NT. For many users, the power of an Intel 486 microprocessor is more than adequate.

When the PC is linked to a network to become a gateway to corporate data bases, however, the picture changes. About 20m PCs are currently connected to networks and the number is expected to double over the next 12 months.

The open systems trend has also had an important influence on the PC market, raising the issue of how to more closely integrate PCs with computers that run the Unix operating system.

The unsuccessful attempts by Microsoft and IBM to establish OS/2 as a new PC operating system, demonstrate the inertia that an installed base of millions of computers can create.

Today's PC standards are therefore expected to remain dominant for several years and only in the mid to late 1990s will the PC sector finally be drawn into the broader scope of interoperable open systems.

the Open Software Foundation and Unix International.

The PC standards battle is, however, just beginning to get under way as participants take up opposing positions. To date, none of the computer products promised by the protagonists have been brought to market and it will probably be late in 1992 when the first such products emerge.

For computer users, the PC standards battle will no doubt prove as confusing as the Unix users. Users will have to pick through a smokescreen of marketing hyperbole to discern which approach will ultimately dominate the market.

In this situation, however, users may simply choose to defer any decision on which direction to take on future PC standards, sticking instead to the current PC standards which are adequately meeting their needs.

Unseating the established Intel-Microsoft PC standard will not be easy, despite the fact that the computer manufacturers promise to protect current investments in PC hardware and software by a company which aims to supply information about open systems to subscriber organisations.

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OPEN SYSTEMS promise simplicity but generate complexity. The fault lies not with the concept but with the computer industry.

There is a confusion of offerings from computer system suppliers, each claiming to be open and, indeed, more open than its competitors.

Add in the profusion of organisations each fighting its own corner in a busy marketplace - X/Open, Unixif, 88 Open, Unix International and so on - and the need for a simple guide to the open systems maze is clear.

Pamela Gray's qualifications to write such a volume are indisputable. Active in open systems for many years, she was president of the international Unix user group from 1986 to 1988 and is now head of a company which aims to supply information about open systems to subscriber organisations.

There are at least two ways to approach an explanatory text about open systems. One is essentially technical, the computing equivalent of outlining why it is easier to make international telephone calls if there are global telecommunications standards or blow-dry your hair abroad if electrical power supplies are the same voltage and sockets the same shape as those at home.

The other is philosophical; in

BOOKS

Guide through the maze

and chapters on how to choose a supplier, for example, and among the appendices there is a list of questions to test the supplier's openness. "Is the supplier flexible or wedded to pure dogma?" it asks.

The list was, in fact, prepared by the US computer manufacturer Data General which is associated with NCC Blackwell in publishing Mr Hugo's book. He notes: "Since it is provided by an interested party, it is open to accusations of bias; test it on other suppliers to see if they cry foul" - and where and why.

One of Mr Hugo's advantages in putting together such a book is his acute scepticism. Although an advocate of open systems, he is by no means an unthinking believer, pointing out that although open systems are usually presented as a low cost option in data processing, in some sectors they may prove more expensive than solutions based on proprietary technology. "In the long run, however, it is obvious that open systems will be more cost effective. The guarantee of freedom for competition that open systems bring with them in itself almost guarantees that."

He looks at the pitfalls inherent in "standards", pointing out that a particular standard for IT systems, supported by the entire computer industry and set in such a way as to reflect the real needs and priorities of the marketplace.

Many of these problems are already well known and their solution has not been especially connected with the establishment of open systems. They include, for example, the problem that many, perhaps a majority, of computer projects consistently overrun both on time and cost. Such overruns have served to sow seeds of doubt about the effectiveness of data processing management.

Then there is the application backlog, the fact that in many data centres the time from a request for a new piece of applications software to its delivery can be up to two years - by which time the reason commissioning the software may have evaporated.

Finally, there is the worldwide shortage of skilled computer specialists, a shortage that is unlikely to improve in the future.

Pamela Gray notes that every organisation is seeking to make its people more productive, to reduce learning times and to use staff from outside organisations without the need for retraining. They are also trying to control and reduce the time taken to develop new systems and provide a better service for their customers.

She concludes that to achieve better and more efficient use of IT and IT people some of the variation that exists in the computer industry must be reduced.

Mr Hugo's book, while no less comprehensive than Dr Gray's, is very much a practical guide for managers on how to choose open systems. There

Alan Cane

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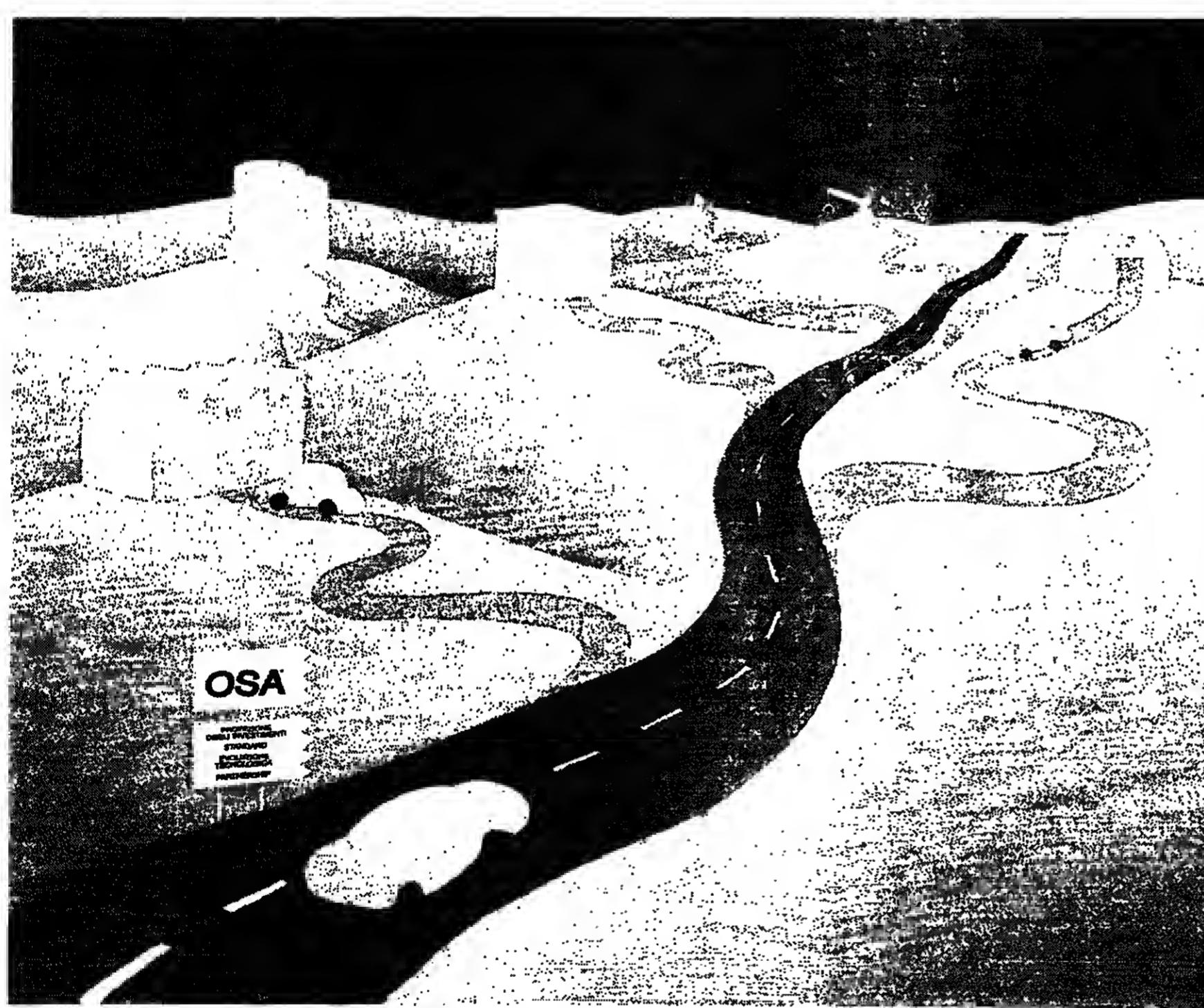
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NETWORKING AND OPEN SYSTEMS 12

With their stronghold under siege, what do the manufacturers have on offer?

The mainframe loses its might

THIS YEAR the greatest proprietary stronghold of the computer business came under siege. The mainframe sector now faces the very real prospect of open systems becoming a reality.

With falling demand and shrinking margins across their proprietary mainframe markets, the world's mainframe manufacturers are now desperately trying to exceed each other in "open" moves with product announcements and statements of direction.

Over the last few months IBM has said it will run its own Unix version called AIX on its 9000 range of machines, ICL also found customers

systems," says Mr Gavin Roach, IT infrastructure marketing manager at IBM UK.

"The problems have changed. It used to be a plea for more processing power, now they are saying 'Help us to integrate our systems, and manage our data,'" he explains.

ICL also found customers

for the major customers. What they are trying to do is to move the good things they have forward, and to get greater supplier independence.

It looks as if it may be a rough ride. Mainframe systems have increasingly supported open systems communications standards over the past 10 years. The hot issue now is application portability and inter-operability across different systems which require more complex and pervasive changes.

The open systems solutions being offered by the mainframe makers on today's market fall into two different, and potentially competing, categories.

First, like IBM's strategy with its mainframe version of AIX, a separate open systems operating system is being offered based on either AT&T's Unix or the Open Software Foundation's OSF. IBM compatible mainframe supplier Amdahl has had a mainframe based Unix system available for many years called UTS which is now on its third major release. But while Amdahl can cite hundreds of UTS licenses around the world, it is difficult to quantify precisely how much the product is being used and for

what purposes.

Nona of the mainframe suppliers expects to make a major killing out of this approach. "In many aspects of large systems effectiveness, comparing Unix with our MVS is chalk and cheese," says IBM's Mr Roach. "We expect most interest in the technical and scientific fields where Unix is more common, but we

of its Network Application Support Program and IBM intends making similar adaptations to MVS. Both are committed to creating an open operating system that supports the US-developed Posix standard.

ICL has already gone one step further and in May this year became the world's first company to be awarded a

thousands of businesses around the world which depend on their existing proprietary systems. The open proprietary approach offers the best of both worlds."

IBM's Mr Roach explains how this will work with the open version of MVS. "We can see there will be a lot of benefits of being able to buy Posix or X/Open compliant applications that run on many different machines," he says. "On the mainframe itself, MVS applications will not be affected but they will be able to access the Posix applications. And with some changes, the Posix applications will be able to access the MVS tasks."

Since there are very few open systems applications available at the mainframe level, and much of a corporation's information resource is tied to the formats and software of its traditional mainframe systems, a gradual transition is the most that companies can hope for at this stage. Besides, most of these open proprietary products will not be available on the market until next year at least.

But does this strategy represent the past trying to catch up with the present, or is it a real solution for the future? Research predicts that

source of proprietary computing power.

"Eventually, we will be able to run open MVS across machines of many different sizes over ever-greater distances and so the mainframe itself is likely to become more an open management information switch or data server," he says.

While the large systems open systems option that emerged this year may not spell the end of mainframes themselves, it may well extinguish the traditional mainframe culture.

Customer needs are forcing the enclaves of old world computing to be broken apart

IBM had little choice. Most of the 29 requirements passed to it by the powerful share customer group last year were about open systems

and offered more details on its plans to create an open systems version of its MVS operating system: Digital, which has a Unix version called Ultrix, has continued to promote its intentions to open up its own VMS operating system; and Britain's ICL has launched a new version of its proprietary mainframe product called Open VMS.

More open mainframe announcements are likely to be on the way from other manufacturers, from Unisys to Bull. IBM had little choice. Out of the 29 requirements passed to IBM by its powerful share customer group last year, "most of them were about open

pushing for an open option on its mainframes, such as British Gas which announced in September that it is to implement a new open systems IT strategy built on the ICL mainframe platforms. "British Gas saw openness as a long-term strategy," says Mr David Slavik, ICL's business manager of corporate systems. "It wants a corporate data centre that gets the best out of its data and networks." He stresses that this is not a short-term issue. "You don't suddenly wave a magic wand and make your millions of lines of code portable. There is no instant fix. The next five years will be the transition era

don't expect many companies will change to this platform in other areas. We will be able to provide the benefits through an open MVS."

That is the key to the second approach - an open version of a company's existing proprietary operating system. Digital is taking this route with its plans to open up its VMS operating system as part

brand by the international open systems organisation X/Open for a mainframe operating system.

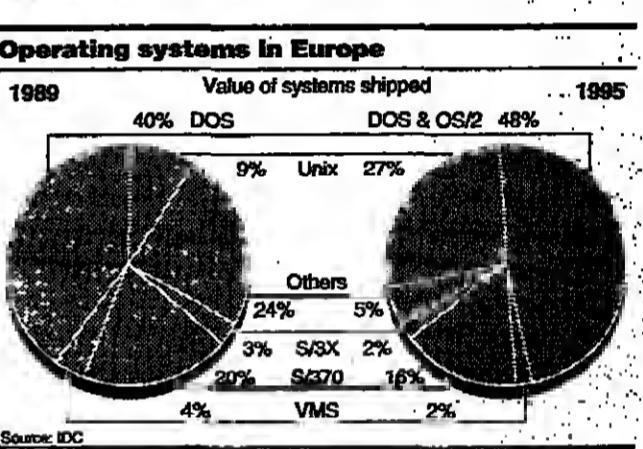
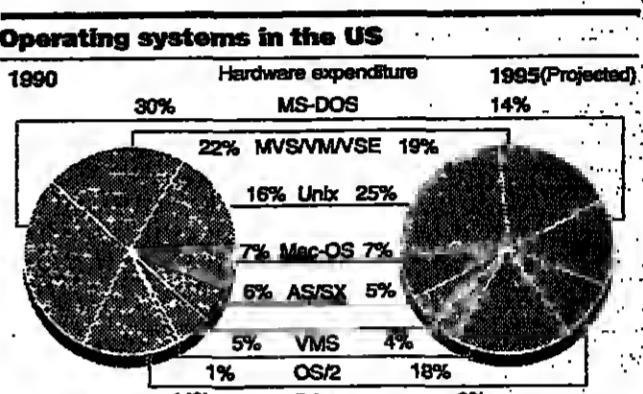
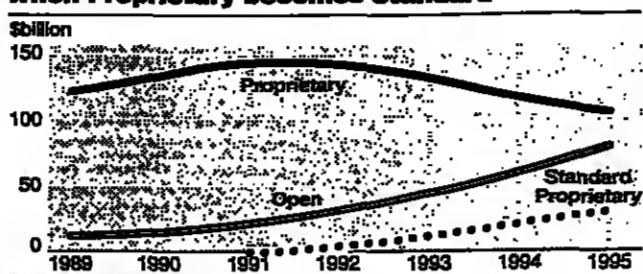
"The general trend in mainframes is now for 'open proprietary' operating systems," says Mr Slavik. "This is a gradual move by suppliers to recognise that they must change, but they also know that there are still

of a gradual transition to an open proprietary market - represent the past trying to catch up with the present, or is it a real solution for the future?

"We expect a number of our customers will choose this option above the Unix approach because it means protection of their existing investments."

The most dramatic result of this process is that the role of the mainframe may change as it becomes less of a primary

Paul Tate



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